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The OIL and GAS JOURNAL

PRODUCING REFINING ENGINEERING MARKETING

Published Every Thursday TULSA, OKLAHOMA, NOVEMBER 28, 1929 $6.00 a Year

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"BJ"

WILSON

CENTER-LATCH ELEVATORS

Only the operator . . . can unlatch the . . . Wilson Center-Latch Elevator . . . The patented spring latch holds tight and can't let go. . . .

This elevator is safe, strong and handles beautifully . . . and is now supplied with BJ *WELDLESS LINKS* when specified.

OIL TOOL DIVISION OF

BYRON JACKSON CO.

2150 East Slauson Avenue,
Los Angeles, California

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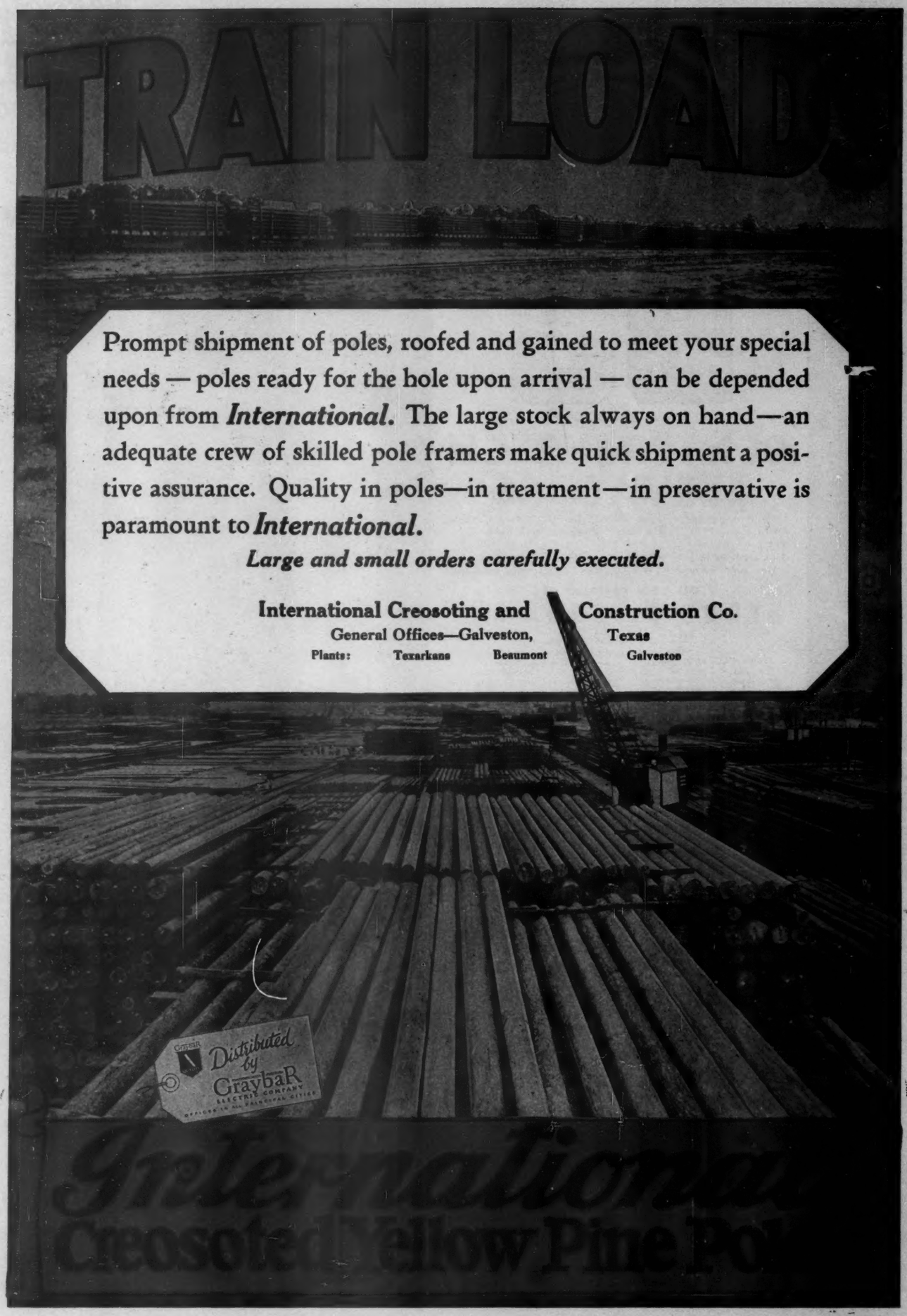
TRAIN LOAD
Prompt shipment of poles, roofed and gained to meet your special needs — poles ready for the hole upon arrival — can be depended upon from International. The large stock always on hand—an adequate crew of skilled pole framers make quick shipment a positive assurance. Quality in poles—in treatment—in preservative is paramount to International.
Large and small orders carefully executed.
International Creosoting and Construction Co.
General Offices—Galveston, Texas
Plants: Texarkana Beaumont Galveston
Distributed by GraybaR
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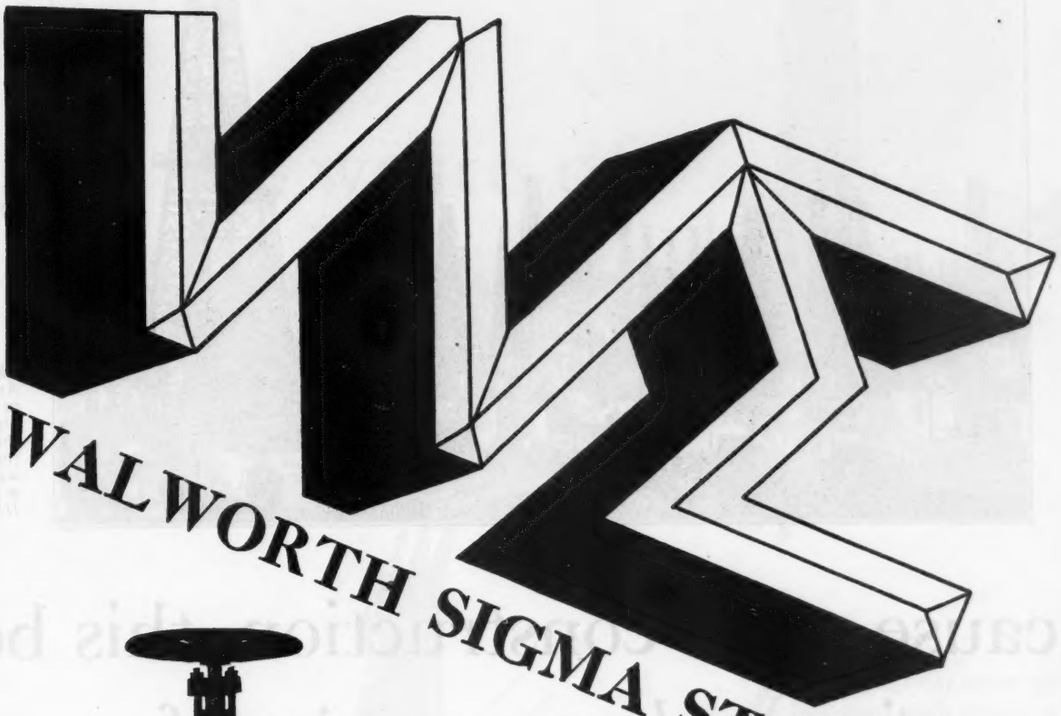


A Series 400 Valve
Its Sigmalloy 351 trim strongly resists corrosion. This valve is therefore especially recommended for Refinery, Cracking and Pipe Line Services.

THE trade-mark WZ combines the Walworth "W" and the Greek Sigma, the symbol of electricity, to identify Walworth Sigma Steel,—an electric steel developed by the X-ray study of castings and subsequent standardization of foundry technique by Walworth engineers.

In Walworth Sigma Steel the defects common to ordinary steel castings have been so effectively eliminated that these valves and fittings are being increasingly specified for oil refinery installations where modern high pressures and temperatures must be met with a wide margin of safety to spare.

WALWORTH

Walworth Company, General Sales Offices: 51 East 42nd St., New York
Plants at Boston, Mass.; Kewanee, Ill.; Greensburg, Pa.; and Attalla, Ala.

. . . Distributors in Principal Cities of the World . . .

Walworth Company Limited, 620 Cathcart St., Montreal, P. Q.
Walworth International Co., New York, Foreign Representative

The Oil and Gas Journal, issued weekly by The Petroleum Publishing Company, 114-116 West Second Street, Tulsa, Oklahoma. Subscription price $6.00 a year; 15 cents a copy. Entered as second-class mail matter December 15, 1911, at the post office at Tulsa, Okla., under the Act of March 3, 1879.

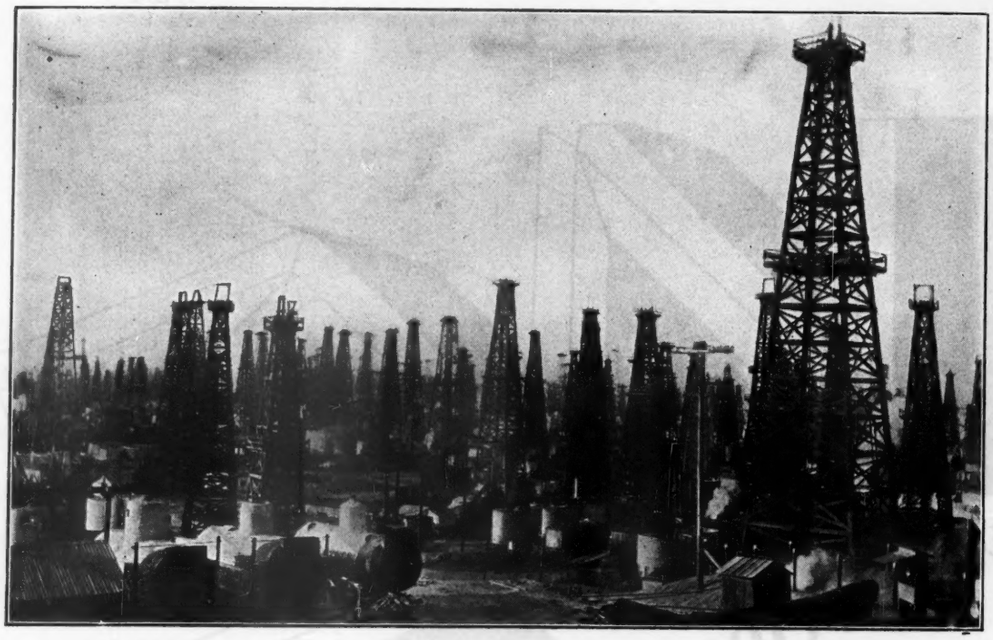


Photo shows Los Angeles basin field in Southern California. Many wells in this field, including the "discovery" well, are equipped with Goodrich Highflex belts.

Because of its construction, this belt gives a *longer service life*

IN belts made the traditional way "internal conflict"—a structural weakness within the belt itself—shortens service life and acts as a bar to belting economy. The very construction of the belt sets up opposing forces. The folded edge is a permanent obstacle to complete flexibility—the insides of the belt work against each other. A moment's study of the panel opposite shows why this is.

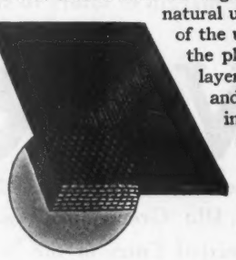
The Goodrich Highflex belt, on the other hand, is built without folding the canvas. As a result each ply ends at the edge of the belt, and there is no "internal conflict" to prevent the free flexing of ply on ply. All parts of the belt will work in harmony.

That is why the Highflex principle has been hailed by engineers as one of the most important developments in the entire history of belt construction. That is why Highflex belts are piling up astonishing service records under the trying conditions met with in the oil industry. In one oil pumping operation an engineer reports "that Highflex belts give him 10 months against service of 2 to 8 months of previous belts."

Fig. 1 Fig. 2

You can test the Highflex *Principle this easy way*

Bend a pad of paper or booklet with the fingers. When viewed from the edge (fig. 1) it assumes a natural uniform curve because of the unhampered action of the plies. Now, if several layers of paper are folded and then bent (fig. 2), you instantly see how the fold distorts the curve and impedes the free movement of the individual layers.



Because of their unique construction principle Highflex belts have no seams to open up, and can be used with either side to the pulley. They eliminate bootlegging, are unaffected by temperature changes, and have excess stretch removed during the process of manufacture.

We will gladly send additional information. Write to The B. F. Goodrich Rubber Company, Akron, O. Established 1870 (In the West, Pacific Goodrich Rubber Co., Los Angeles, Cal.) or the branch nearest you (see list below.)

* * *

Oil Field Branches:

THE B. F. GOODRICH RUBBER COMPANY

1201 Young Street..... Dallas, Texas
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Goodrich

—fight the waste of bottom water!

Everybody *talks* conservation—but how many really *practice* it?

There are still producers who use old fashioned methods for plugging off bottom water — because they haven't tried lead wool.

Eagle Lead Wool is quick to use, economical and effective. As easy to handle as ordinary rope; no waste. Makes a permanent non-corroding plug of pure lead that fills every crevice.

Cartridge Containers are supplied in sizes for all casings. At your dealer—or from Eagle-Picher at Joplin. Free descriptive booklet on request. *The Eagle-Picher Lead Company, Chicago, Joplin, Cincinnati.*

Reg. U.S. Pat. Off.

EAGLE Lead Wool

and Cartridge Container

Do you know Eagle Rope Socket Metal?

35% lighter, four times as hard as No. 4 Babbitt. Especially designed for socketing wire rope. Economical and long lasting. Free booklet on request.

A Submerged Scale Shedding Condenser or Cooler

ANY available cooling water—no matter how hard, salt or dirty—will indefinitely maintain full rated condensing or cooling effect with G-R Submerged Type Bentube Sections.

The patent construction of these sections causes scale to be automatically and continuously shed without the necessity of hand scaling with its resulting shut-downs and labor expense.

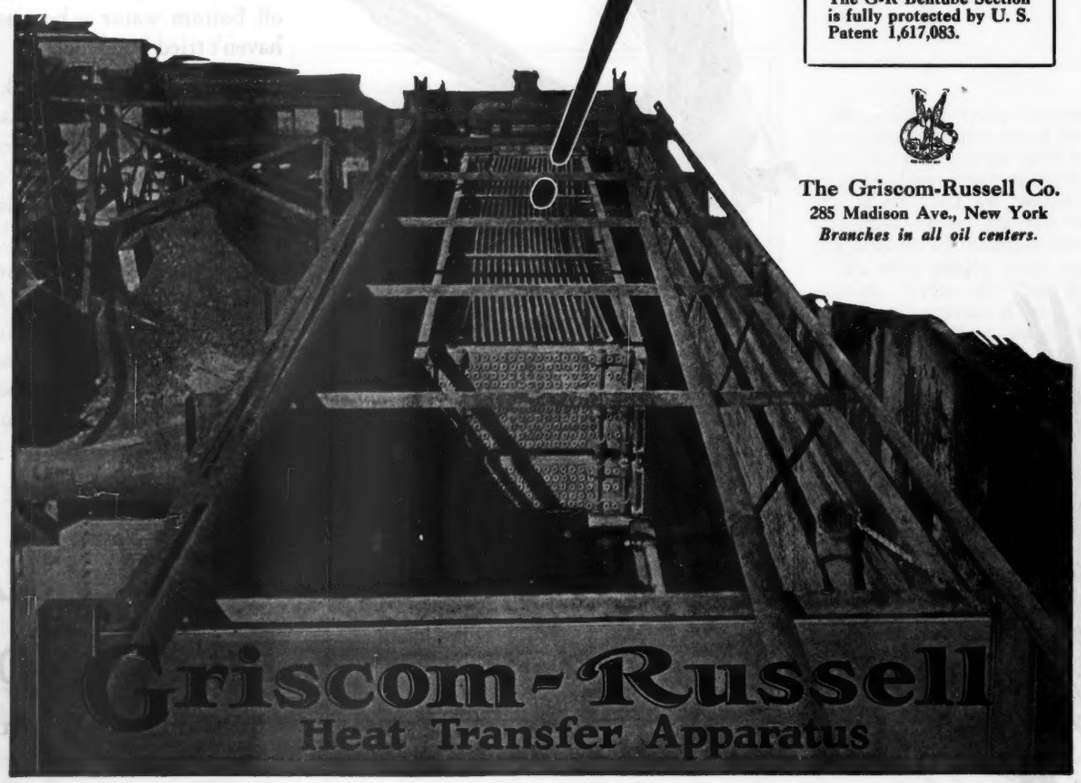
In a typical Submerged Type Bentube Section installation on cylinder stock cooling service, the stills are now being pumped out in about one-fifth the time formerly required with other types of submerged cooling apparatus, and oxidizing or coking of the oil has been eliminated.

G-R Submerged Bentube Sections can materially speed up your condensing and cooling operations and improve their effectiveness and economy. Write for full information.

The G-R Bentube Section

1,000,000 gallons capacity in use

PATENT NOTICE
The G-R Bentube Section is fully protected by U. S. Patent 1,617,083.



The Griscom-Russell Co.
285 Madison Ave., New York
Branches in all oil centers.

Worthington Duplex Hot Oil Surge Pump. In this type of pump, each end of the pump cylinder is connected to its valve chamber by steel surge lines. The pump cylinder and surge lines are filled with cold oil. In operation, the hot oil is admitted by the suction valves into the valve chambers, and is forced back through the discharge valves, without reaching a point near the pump cylinder. The slight transference of heat from the hot oil to the cold oil is overcome by water-jacketing the surge lines or by introducing cool oil into the pump cylinder as necessary. The latter is done only at infrequent intervals.

Hot Oil . . . *does not enter the working cylinder of this* Surge Pump

A NUMBER of very interesting installations of hot oil surge pumps have been made by Worthington in oil refineries ranging from Massachusetts to Wyoming, from Illinois to Texas.

Interesting . . . to refinery men . . . because in these installations the hot oil does not enter the pump cylinder and, consequently, the following advantages are gained:

1. The destructive effects of high temperatures on piston packing and rod packing are eliminated.
2. Water-jacketing of pump cylinder and stuffing boxes, with attendant circulating equipment, is eliminated.
3. Loss of heat in liquid pumped is minimized.
4. The valve chest through which the hot oil is circulated may be placed outside the room in which the pump is located.

These pumps are used for circulating oil, at temperatures of 400°F to 1000°F. They are far beyond the experimental stage and have been in successful use for more than eight years.

At your request, an engineer, familiar with the problems of hot oil pumping, will explain fully how Worthington Surge Pumps can serve you.

WORTHINGTON

PUMPS
COMPRESSORS
CONDENSERS *and* Auxiliaries
DIESEL ENGINES
GAS ENGINES
FEEDWATER HEATERS
WATER, OIL *and* GASOLINE METERS

Literature on Request

P-81

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WORTHINGTON

TRADE K-W MARK

FAIN-McGAHA OIL CORPORATION
WICHITA FALLS, TEXAS

September 23, 1929.

K.W. Ignition Corporation,
Cleveland, Ohio.

Gentlemen:

Like all users of ---- Ignition for gas engines, we have experienced considerable trouble in maintaining continuous service, and keeping cost of repairs down, until we installed several of your K-W Magnetos.

At present we have six different installations on Black Bear, Superior, Webers and Frick Reids, both two cycle and four cycle.

In each instance the installations have not given us any trouble whatsoever and have given the engines more power, and at the same time have made them considerably more easy to start.

It is our plan to do away with the other magnetos entirely and install your K-W Magnetos on every engine, as well as equip our Fordson tractors with your Model N.K. Magneto outfit.

We thank you for bringing this equipment to our attention.

Very truly yours,
FAIN-McGAHA OIL CORPORATION
BY: Ralph Roderick
Superintendent of Production.

RR:m

TRADE K-W MARK

FOR CONTINUOUS HEAVY DUTY ENGINE SERVICE -

THE TRADE K-W MARK Magneto

A GIANT FOR POWER—A BRUTE FOR ENDURANCE
MODELS FOR EVERY TYPE OF ENGINE

MANUFACTURED BY
THE TRADE K-W MARK IGNITION CORP.
CLEVELAND, OHIO, U.S.A.

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TULSA, OKLAHOMA

NYE TOOLS FOR SALE BY ALL LEADING SUPPLY HOUSES

A LETTER FROM HARRY G. NYE

TO THE OIL MEN OF THE U. S. A.

"AS HANDY AS A BRICK IN A FIGHT"

FELLOW CITIZENS:

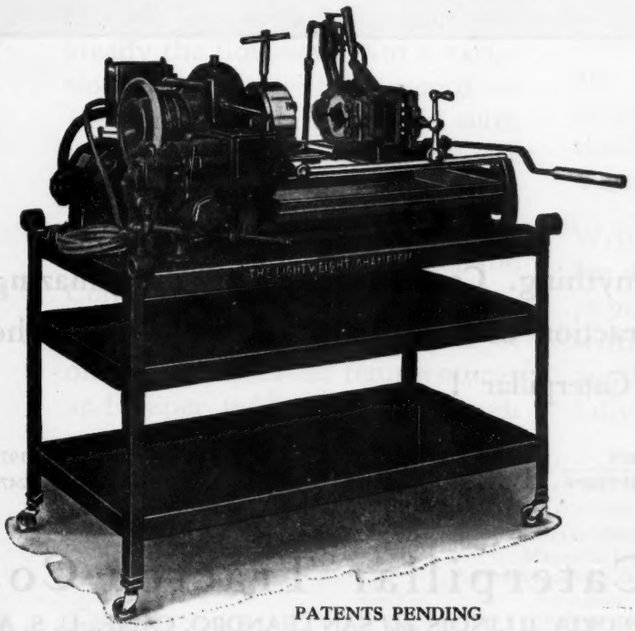
These new lightweight portable pipe machines that all the oil men are buying are certainly handy things—as handy as a girl's bathing suit with a pocket in to put the bathing suit in.

For instance there are two speeds forward and two reverse. You can change direction as quick and easy as a politician. If you have ever seen a Congressman reverse himself, you know just how this works.

Then there is the self-centering guide, for all sizes of pipe. The way that thing works reminds me of a star boarder finding his mouth with a forkful of chicken. I never saw it miss the mark yet. Nor him.

And no oil-cups to remember or forget. A geared oil-pump keeps the oil coming all the while the machine is going. Only one thing in the world could ever be better. A bank that would do the same with money.

The pipe-cutter itself is the floating type, one wheel and two rollers, the kind the best cooks use—I mean the big nipple manufacturers. That makes us as good as they are, however good that is.



PATENTS PENDING

(THE LIGHTWEIGHT CHAMPION)

POWER PIPE THREADING MACHINE
THREADS, CUTS OFF AND REAMS
CAPACITY ½ TO 2 INCHES

As for production—with its powerful motor, high speed, 12-inch carriage travel, quick acting guide and everything—well, nothing equals it for production, unless it's a housefly, or a pair of rabbits.

And as for portability, a couple of men stick a couple of pieces of inch pipe through a couple of lugs on each side, and the machine is anywhere you want it in a couple of seconds.

In fact, one customer of ours wrote in that his machine had become such a great pet that it followed him around. Personally, I think he is a liar. But it is always around somewhere handy.

Yes, sir, these portable pipe machines are a great thing—when they have these features. You wouldn't want one without, of course. The new Nye No. 50 Portable Pipe Machine, "THE LIGHTWEIGHT CHAMPION," has all of them.

Price $299.00—Dies extra.

Faithfully yours,

HARRY G. NYE

Otherwise Known As

The Nye Tool & Machine Works

4120-30 Fullerton Avenue Chicago, Ill.

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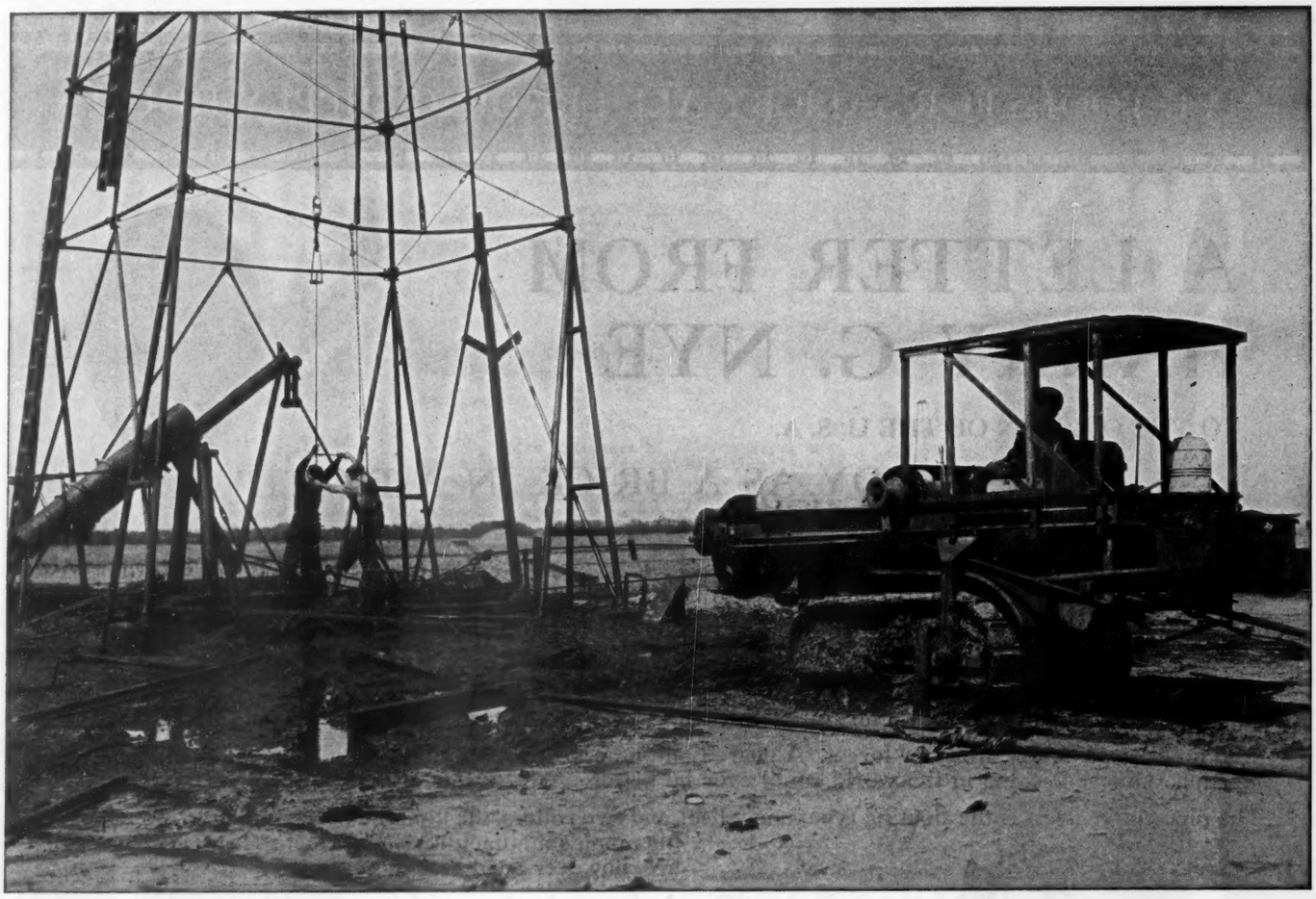
NYE TOOLS FOR SALE BY ALL LEADING SUPPLY HOUSES



Pulling Rods

MUD, heat, distance—the "Caterpillar" Tractor conquers all three! Equipped with a winch* it is master of most jobs the oil man faces. Here it's pulling rods through the floor block—it is ready to go on to a job of hauling pipe over bad roads—or to build better roads. Ready to haul pipe, erect a derrick, build a tank, fight fire—most anything. Competent power and amazing traction under positive control—that's the "Caterpillar"!

*The tractor pictured is a Twenty fitted with a Card-Kelt All-steel Winch operated by the Empire Oil and Gas Company, Butler Co., Kansas.

Prices—f. o. b. Peoria, Illinois

TEN	$1125	TWENTY	$1975
FIFTEEN	$1500	THIRTY	$2475
SIXTY	$4300		

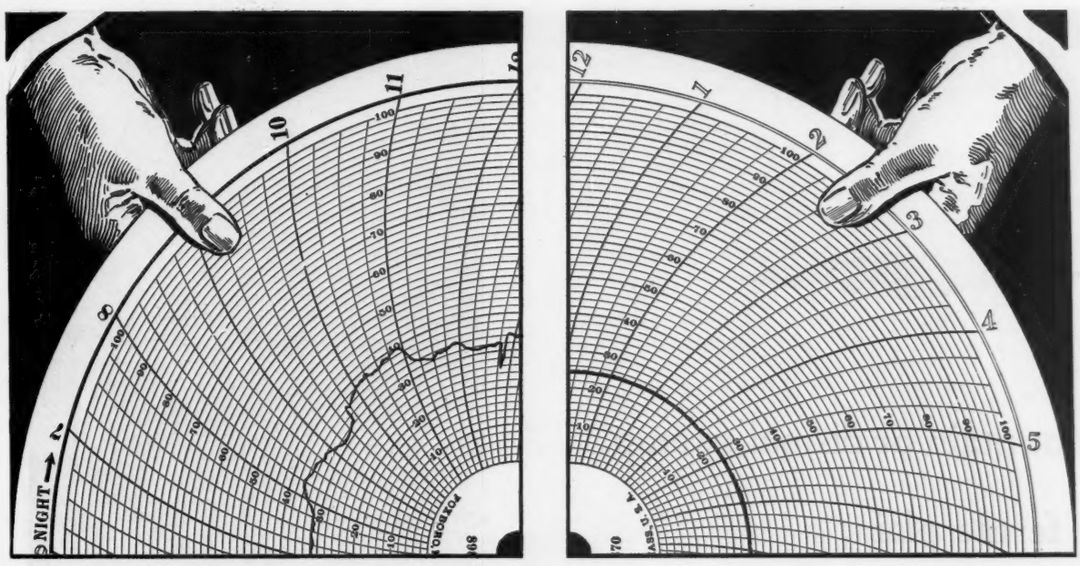
Caterpillar Tractor Co.

PEORIA, ILLINOIS *and* SAN LEANDRO, CALIF., U. S. A.

Track-type Tractors / Combines / Road Machinery

(There is a "Caterpillar" Dealer Near You)

CATERPILLAR
REG. U.S. PAT. OFF.
TRACTOR



Which Chart do you Choose?

LOOK at these two charts. Which one do you choose? The record to the right was made by a Foxboro Flow Controller on the oil line to a still. See how steady the flow was. Not a variation. Compare this record of Foxboro Automatic Control with the record of the same process (at left) regulated by hand. Can there be any doubt as to the desirability of Foxboro Automatic Control?

With a constant rate of flow of oil to the still tower temperatures and vapor velocities up through the tower are more uniform. Operators can cut fractions closer, get a better grade of distillate at a saving in operating expense.

Foxboro Flow Controllers operate independently of line pressures. They are guaranteed to do their job of controlling flow right. You can depend on them.

Write the nearest Branch Office for a Foxboro Engineer to come to your plant. Go over the matter with him. He will explain the application and installation more fully.

THE FOXBORO COMPANY
Neponset Avenue, Foxboro, Mass., U. S. A.
28 North Guthrie Ave., Tulsa, Okla.
Magnolia Building, Dallas, Texas
J. E. Treacy, Strada Golesti No. 9, Ploesti, Roumania

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Boston	Cleveland	Los Angeles	Detroit
			Salt Lake City

Agents for Robinson Patented Orifice Flange Fittings

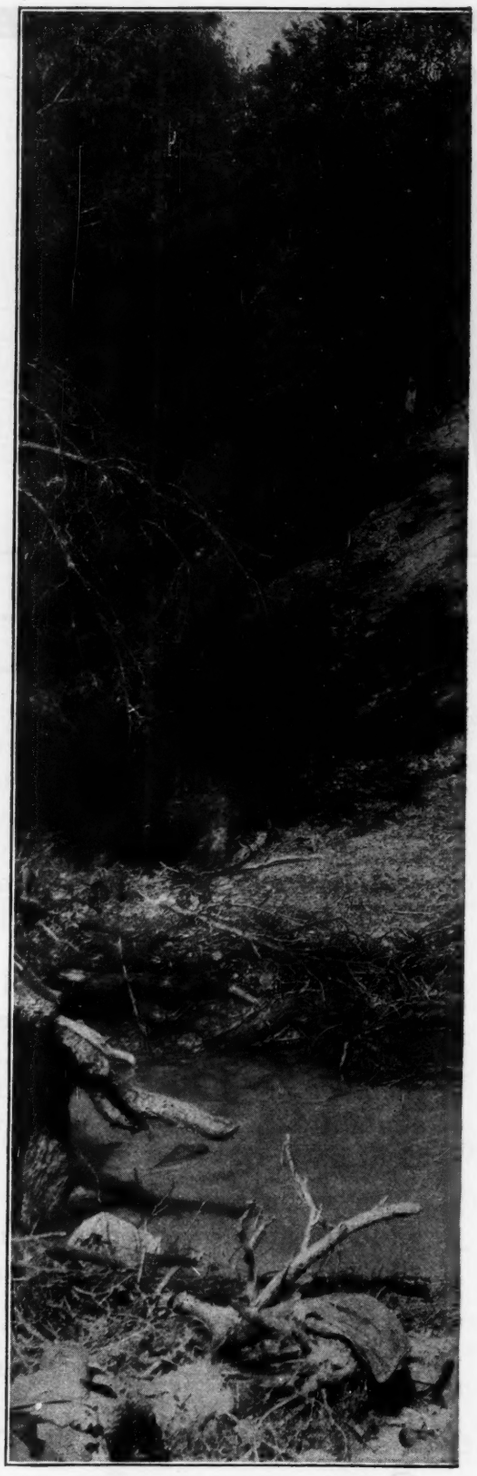
The Foxboro Guarantee, sealed to each Recording and Controlling Instrument.

FOXBORO
REG. U. S. PAT. OFF.
THE COMPASS OF INDUSTRY

Foxboro Flow Controller.

Instruments for Controlling, Recording and Indicating Temperature, Flow, Humidity and Pressure

Across mountain or dismal swamp,
desert or fertile plain,
swollen creek or sandy arroyo,
under all conditions,
in the face of all the elements,
SMITHWelded Gas Line Pipe and the SMITHWeld Bell and Spigot and Steel Expansion Joints have made pipe line construction simpler, faster, more economical.



A. O. SMITH CORPORATION
Oil & Gas Field Products Division

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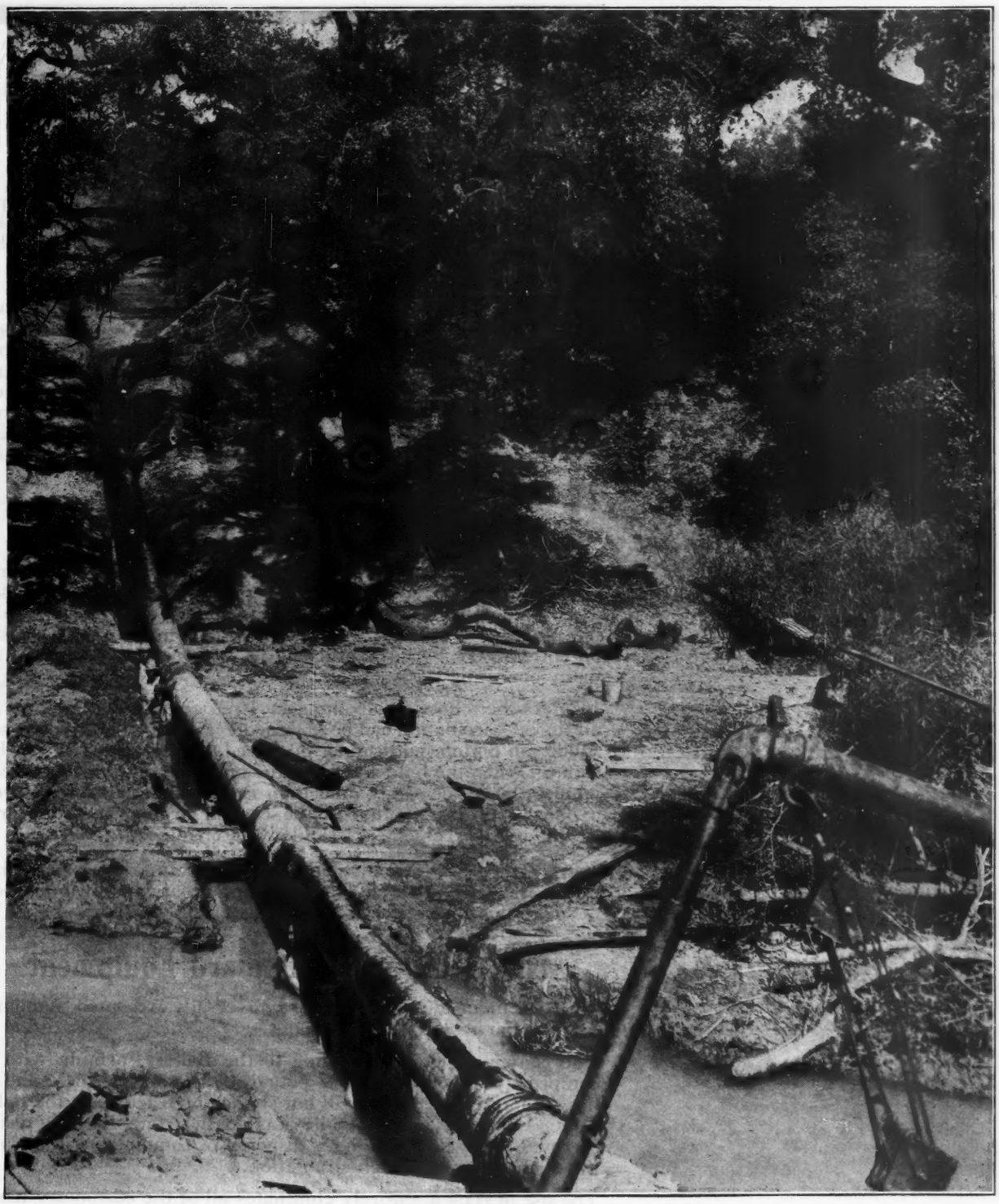

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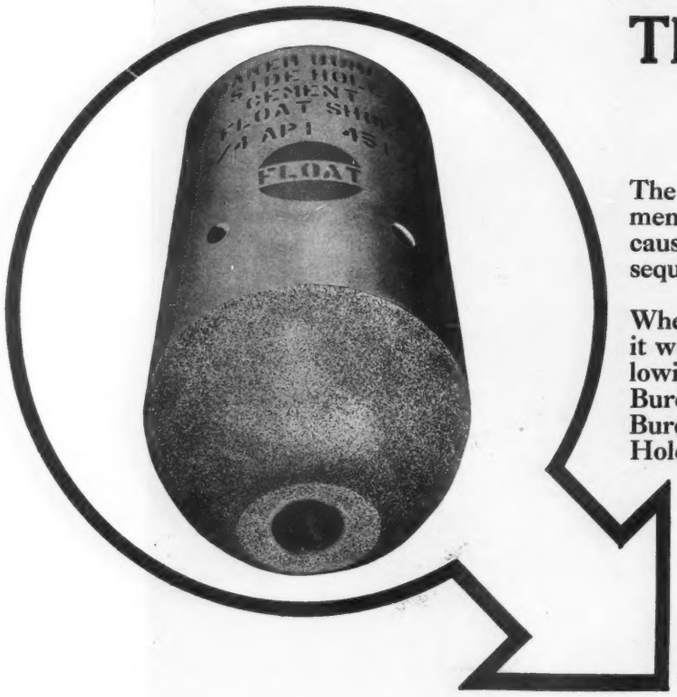
GAS LINE PIPE



The Baker Cement Equipment Line Is Complete

The use of cast-iron in Floating, Guiding, and Cementing Equipment was never satisfactory, principally owing to the trouble caused by fragments of cast iron left in the hole to hamper subsequent operations.

When Baker designed and created Baker Cement Equipment, it was determined to make the line a complete one, and the following items are now embraced under this classification: Baker-Burch Cement Float Shoe, Baker Cement Float Collar, Baker-Burch Side-Hole Cement Float Shoe, Baker-Burch HIGH Side-Hole Cement Float Shoe, Baker Cement Guide Casing Shoe, Baker Cement Baffle Collar with Hole, Baker Cement Solid Baffle Collar, and Baker Cement Bull Plug Casing Shoe.

Baker-Burch Side-Hole Cement Float Shoe

The Baker-Burch Side-Hole Cement Float Shoe is a variation of the regular Baker-Burch Cement Float Shoe, designed to meet the demand for a float shoe which would not plug the circulation when a long string has been set solidly on bottom. Owing to its efficiency it is given the preference in many operating areas.

It offers the following advantages: Free and easy circulation at all times. Circulation can be obtained even though the shoe is set solidly on bottom and cannot be raised. Circulation will not be shut off when the hole is tight at the bottom. Gives better circulaion in heavy or sandy mud than is otherwise possible. Gives a more even distribution of the cement around the shoe and casing and the cement is less likely to channel.

Its records of performance have proven the marked superiority of the Baker-Burch Side-Hole Cement Float Shoe in hundreds of successful jobs in the deepest fields of the world.

The Recognized Standard Equipment

Baker Cement Equipment is the Universally Accepted Standard in these particulars:

The cement is made according to the Baker Formula with a compressive strength of 6002 pounds to the square inch, and it has demonstrated that it will not shatter or fracture in the hole. Baker Formula Cement, while amazingly strong, is easily disintegrated under the drill and is disposed of completely either into the formation or through circulation.

The use of cement entirely eliminates all of the customary troubles of cast iron, and as one operator has expressed it, "The minute you are out of the shoe you are ready to go ahead."

Baker Cement Equipment is the only equipment of its kind, and is protected by Patents Granted and Patents Pending. Specify it, and see that you get it.

WRITE FOR LITERATURE: — For the sake of efficiency, economy, and safety, you should have an accurate and complete knowledge of Baker Cement Floating, Guiding, and Cementing Equipment. Complete descriptive literature will be sent on request. WHY NOT ASK FOR IT NOW?

Put the BAKER LINE to work during the coming year for greater efficiency.

Mid-Continent Branches
Tulsa, Oklahoma Houston, Texas
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25 Broadway, New York City

BAKER
OIL TOOLS, INC.
P. O. Box L, Huntington Park, Calif.
California Branches
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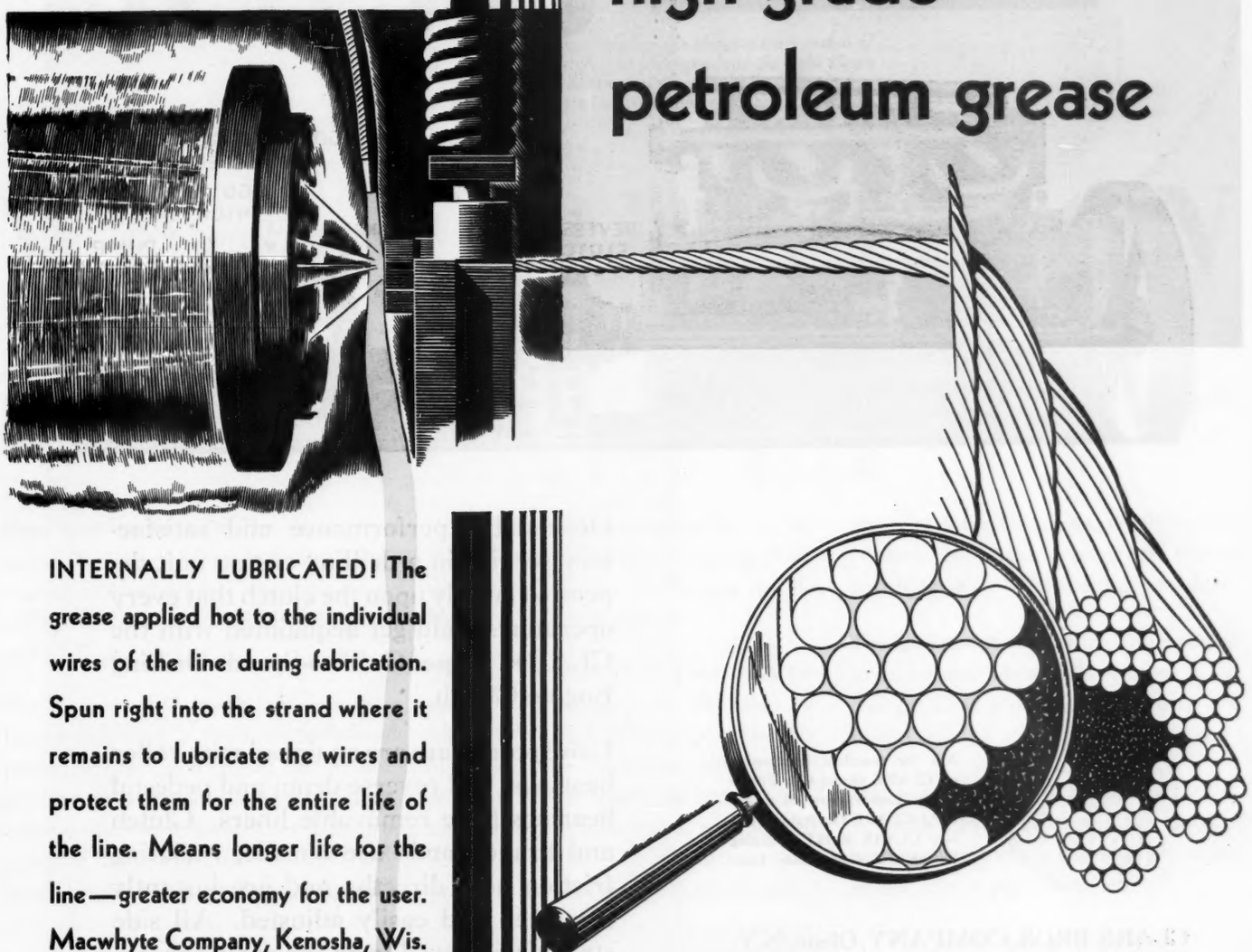
Mid-Continent Distributors
B. & A. SPECIALTY CO.
220 E. Brady St., Tulsa, Okla.
2301 Commerce St., Houston, Tex.

The BAKER LINE of Oil Well Specialties COMBINES Superior Performance with Economy.

Every wire in the line sprayed with high grade petroleum grease



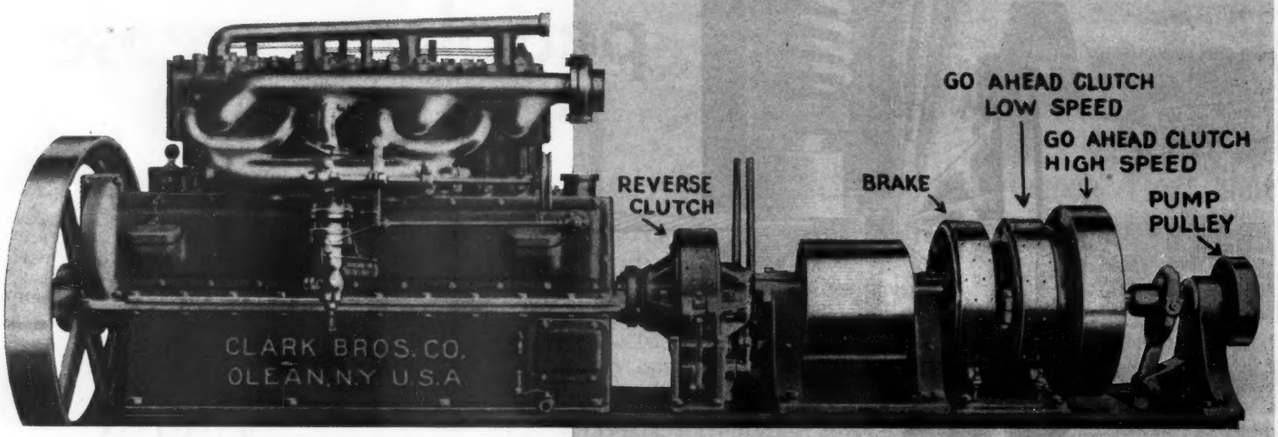
INTERNALLY LUBRICATED! The grease applied hot to the individual wires of the line during fabrication. Spun right into the strand where it remains to lubricate the wires and protect them for the entire life of the line. Means longer life for the line—greater economy for the user. Macwhyte Company, Kenosha, Wis.

MACWHYTE Wire Lines

A Great Drilling Engine

because it has

A GREAT CLUTCH



Dependable performance and satisfactory service in a drilling engine unit depend so largely upon the clutch that every operator should get acquainted with the CLARK Type G Two-Speed Drilling Engine Clutch.

Low speed gears are equipped with roller bearings. All reverse drum and pedestal bearings have removable liners. Clutch and brake bands are outside, radiating friction heat directly, and are instantly inspected and easily adjusted. All side strain is removed from the engine crankshaft. Detailed data on request.

Compressors and Gas Engines

Ask for complete information on CLARK Direct Gas Engine Driven Compressors—95 to 400 H.P.—CLARK Generator Units —or CLARK 40 H.P. Pumping Engine and Compressor Unit.

CLARK BROS. COMPANY, Olean, N.Y.
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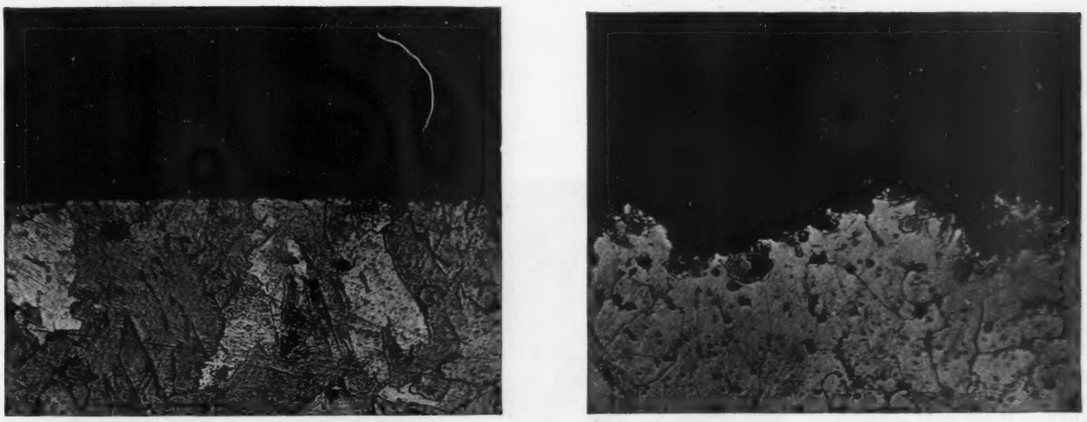
CLARK



The left-hand unretouched microphotograph shows a cross-section of the shell of new steel line pipe. The photograph at the right shows the destructive effect of corrosion on unprotected pipe after it has been in the ground. Photographs have been enlarged 250 times.

When *CORROSION* attacks your pipe line

Most line operators realize the importance of giving the pipe a protective coating to ward off the inevitable menace of corrosion. But there are coatings *and* coatings.

For 23 years Hill, Hubbell & Company have specialized in the manufacture of protective coatings for metal, and oil and gas lines in particular. The fruit of their continuous research and experiment is a group of products called Biturine Coatings—Biturine Enamel; Biturine Enamel Primer*; Biturine Solution No. 5; Biturine 70-30; Biturine Coupling Solution. Biturine Enamel Primer can be obtained with Inhiburine.

Biturine, the base from which Biturine products are made, is not like other bituminous coatings. It is composed largely of sulphur-free coke oven pitch run to our own specifications and blended skilfully at high temperatures, with refined natural asphalts. The mixture is then processed to form a perfect chemical union of these Bitumens, resulting in a product proof against acids and alkalis and incapable of absorbing moisture.

The final test of any coating is the record in actual use. Thousands of miles of oil and gas lines protected by Biturine are in use today.

Our nearest office will be glad to furnish you with a list of Biturine users and specific instances where Biturine has added longer life to pipe lines.

***INHIBURINE**

This entirely new inhibitor with extraordinary anti-corrosive powers is now being incorporated into Biturine Primer whenever specified. Being solvent in Bitumens it becomes an integral part of the priming coat and thereby functions as a second line of defense against corrosion should the Biturine Enamel Coating be penetrated.

BITURINE COATINGS

Biturine Enamel — Biturine Enamel Primer*
Biturine Coupling Solution
Biturine Solution No. 5 — Biturine 70-30
Biturine Enamel Primer can be obtained with Inhiburine

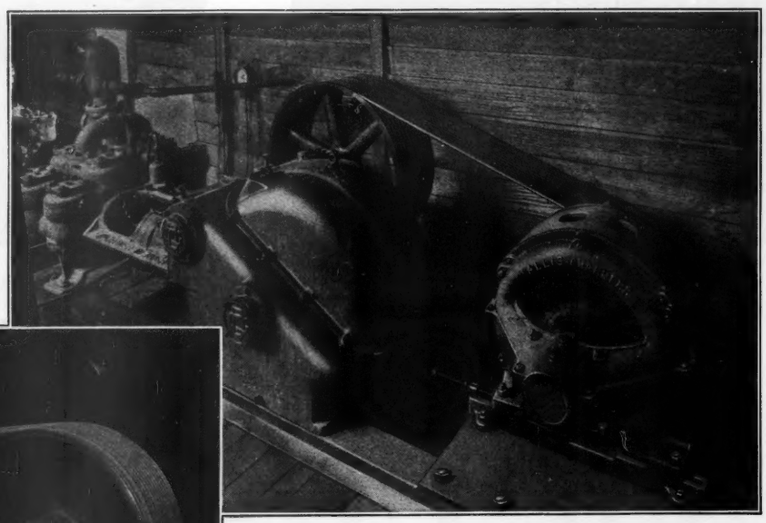
GET THE FACTS

About machine coated, machine wrapped pipe *at the mill.* A new and exclusive Hill, Hubbell & Company process now available for the production of six leading pipe mills. Biturine coatings are particularly adapted for use with this process.

GENERAL PAINT CORPORATION

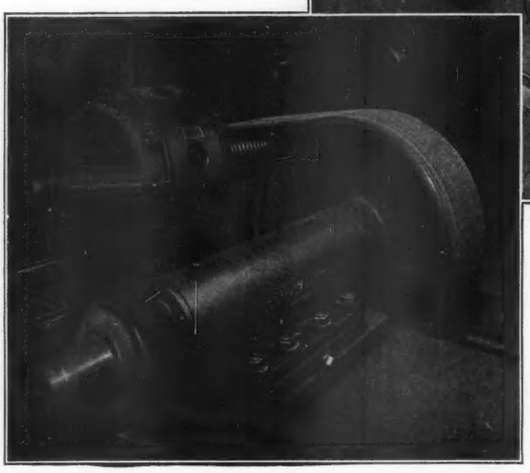
HILL, HUBBELL & COMPANY DIVISION

CHICAGO NEW YORK TULSA HOUSTON DALLAS SAN FRANCISCO OAKLAND
LOS ANGELES PORTLAND SEATTLE SPOKANE



150 h.p. Allis-Chalmers Variable Speed Motor driving Slush Pump through Texrope Drive.

150 h.p. Allis-Chalmers Rotary Drilling Motor and Control driving Draw Works and Table through Texrope Speed Reducer.



Motors, Drives *and* Control *for* Rotary Rigs

Special motors and improved variable speed controls have led an increasing number of drilling contractors and oil operators to look to electricity as a means of decreasing their drilling costs.

Allis-Chalmers builds transformers, motors and controls for both cable and rotary drilling rigs. Special drilling motors have been developed with enclosed slip-rings and drip-proof frames as protection against splashing water or corrosive gases. Allis-Chalmers control equipment is completely assembled, wired and mounted on skids for easy handling. Rotary control consists of full magnetic type with predetermined acceleration or semi-magnetic type with drum control for speed regulation. Slush pump controls are of the semi-magnetic type.

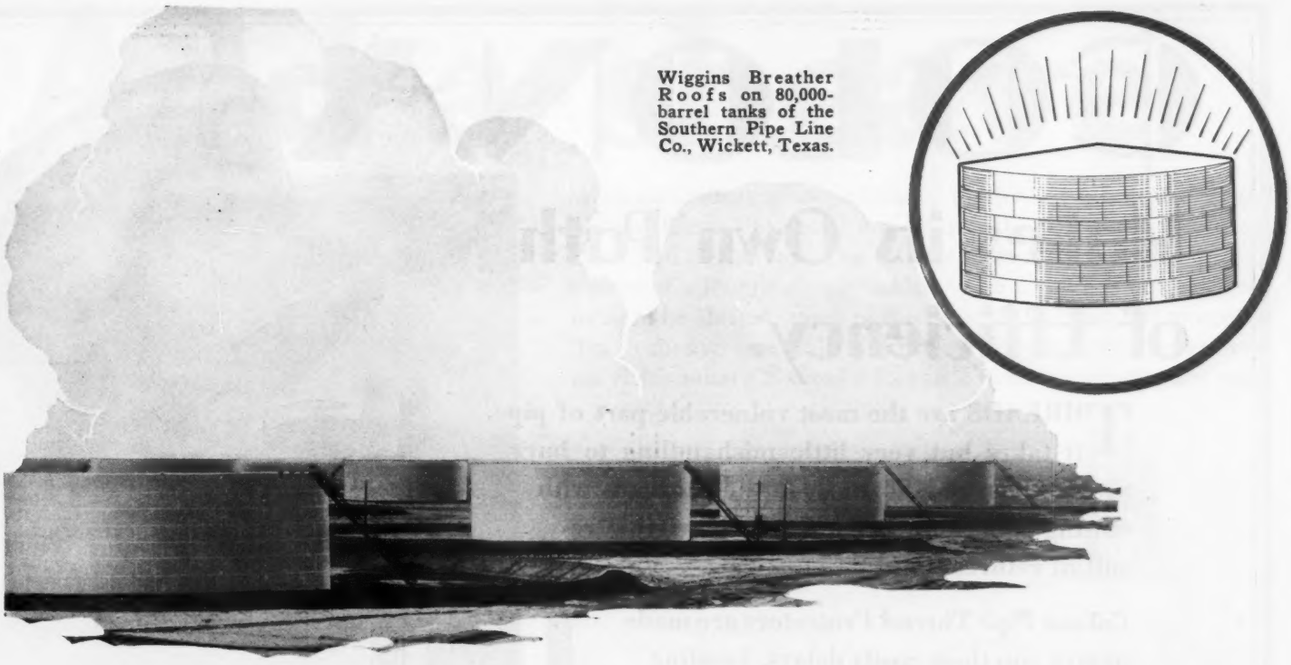
Texrope units furnish the necessary speed reduction from the motor to the draw works. Texropes are flexible and furnish a shock absorbing medium between the motor and the drive chain or clutches. They are widely used as slush pump drives — operating on close centers without slipping and protecting the motor from shocks.

Write your nearest oil field office for detailed information on Allis-Chalmers oil field equipment. Stocks carried at Tulsa, Houston, Sweetwater, and Los Angeles.

ALLIS-CHALMERS MANUFACTURING CO., MILWAUKEE, WIS.

ALLIS-CHALMERS A-C MILWAUKEE

ALLIS-CHALMERS MOTORS *and* TEXROPE DRIVES



Wiggins Breather Roofs on 80,000-barrel tanks of the Southern Pipe Line Co., Wickett, Texas.

—you wouldn't make tank roofs out of platinum

Our booklet, "Wiggins Breather Roofs", sent on request.

The use of rare metal in a tank roof would be obvious waste. There is another important waste in every tank covered by a cone roof, caused by the loss of vapor escaping during thermal expansion and contraction.

This loss can be practically eliminated. On standing storage, Wiggins Breather Roofs reduce the loss of light fractions by allowing volumetric changes without letting air enter to carry away vapor. Fire hazard is also minimized since the vapor comes in contact with only a small amount of air. A sudden shower in hot weather cools a cone roof rapidly with a resulting intake of a large quantity of fresh air, that produces a highly explosive mixture, when lightning is most prevalent. The Breather Roof eliminates this.

It will pay you to investigate Wiggins Breather Roofs for standing storage and Floating Roofs for working tanks. Our nearest office will gladly give you an estimate for equipping your tanks.

CHICAGO BRIDGE & IRON WORKS

Dallas	3341 Magnolia Bldg.	Atlanta	1054 Healey Bldg.
New York	3147 Hudson Terminal	Boston	1517 Consolidated Gas Bldg.
Cleveland	2204 Union Trust Bldg.	Philadelphia	1615 Jefferson Bldg.
Chicago	2128 Old Colony Bldg.	San Francisco	1054 Rialto Bldg.
Detroit	1514 Lafayette Bldg.	Havana, Cuba	Apartado 2507

STOP EVAPORATION LOSSES

with WIGGINS BREATHER ROOFS

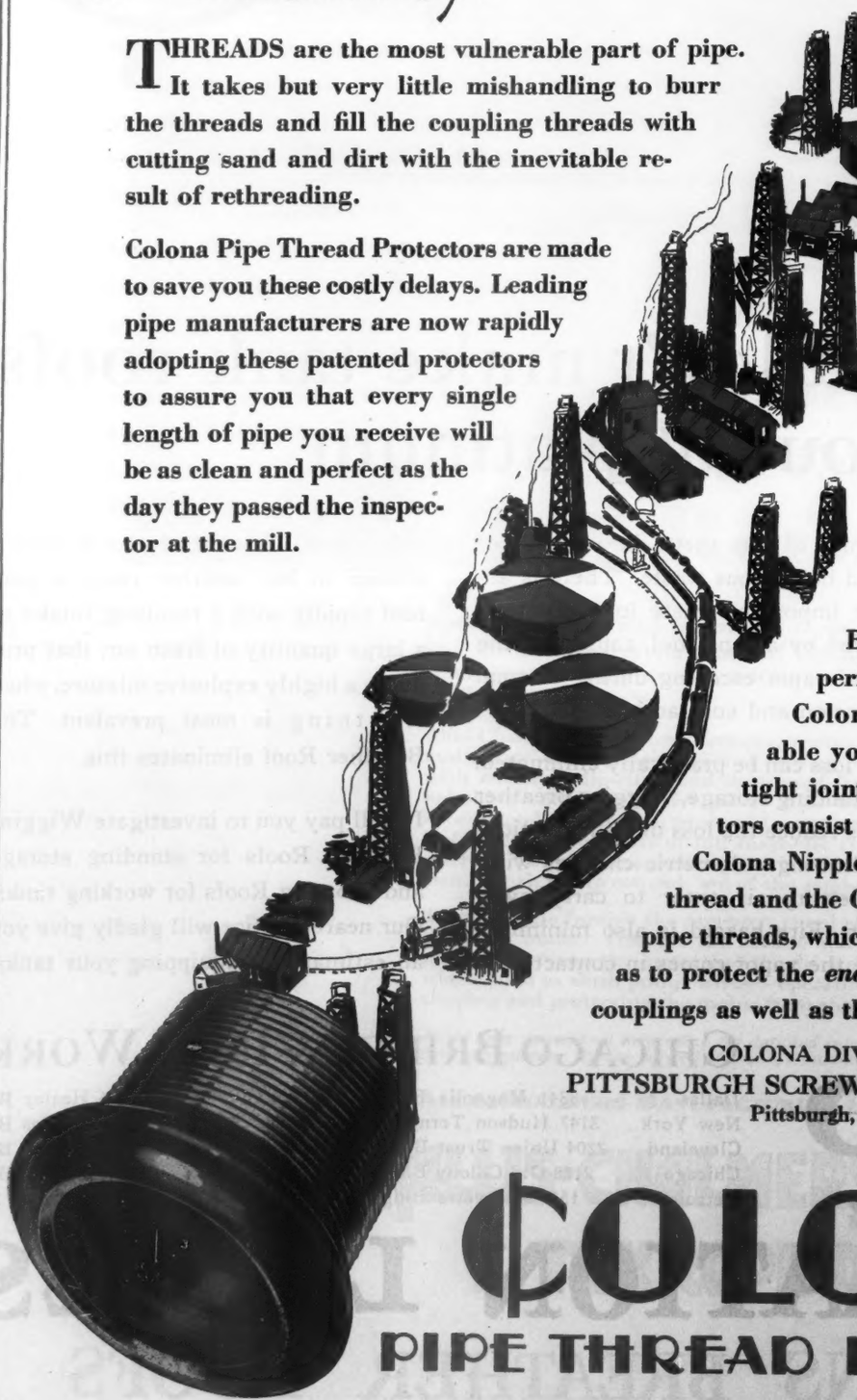
OGJ 11-28 Gray

COLONA

Makes its Own Path of Efficiency.

THREADS are the most vulnerable part of pipe. It takes but very little mishandling to burr the threads and fill the coupling threads with cutting sand and dirt with the inevitable result of rethreading.

Colona Pipe Thread Protectors are made to save you these costly delays. Leading pipe manufacturers are now rapidly adopting these patented protectors to assure you that every single length of pipe you receive will be as clean and perfect as the day they passed the inspector at the mill.



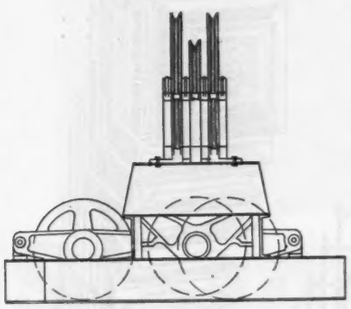
By maintaining a perfectly clean thread, Colona Protectors enable you to make good, tight joints. Colona Protectors consist of two units—the Colona Nipple for the coupling thread and the Colona Cap for the pipe threads, which are so designed as to protect the *ends* of the pipe and couplings as well as the threads.

COLONA DIVISION
PITTSBURGH SCREW & BOLT CORP.
Pittsburgh, Pa.

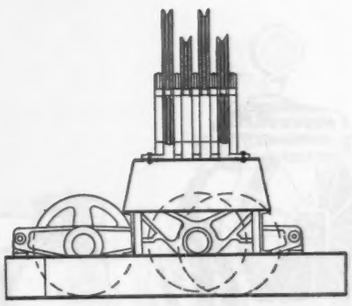
COLONA
PIPE THREAD PROTECTORS

Add-a-sheave

Without drilling a single hole or discarding a bolt the Regan Crown Block (Type A) can be quickly and easily converted from 7 to 8 sheaves. The 3 large sheaves are simply moved over and a fourth sheave added. The Crown Block does not have to be shifted; none of the lines are thrown out of center. The 8-sheave assembly is growing in popularity in the deepest fields where 5-sheave Regan Traveling Blocks are used.

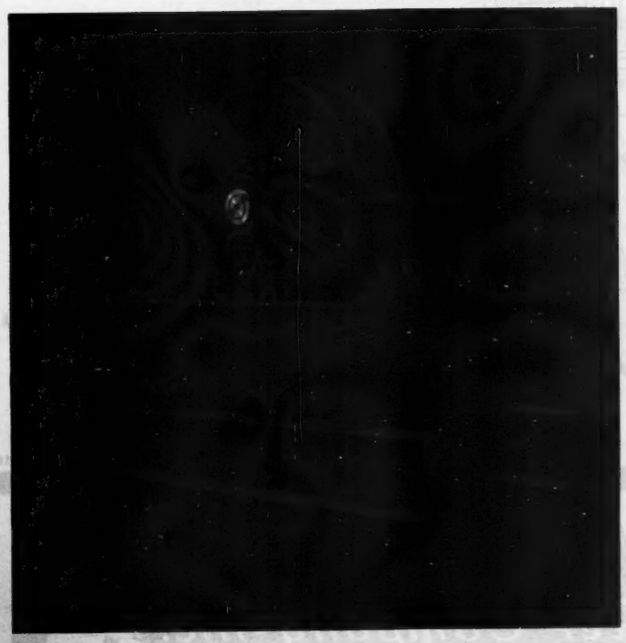


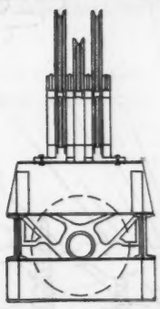
Type A—7 sheaves



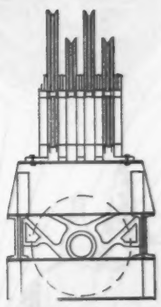
Type A—8 sheaves

Regan's *Convertible* Type A & B Crown Blocks





Type B—5 sheaves



Type B—6 sheaves

Type B Regan Crown Block used extensively in the Mid-Continent and Overseas fields, can be easily converted from 5 to 6 sheaves by the same procedure of moving over the 3 large sheaves and adding a fourth. (This can be done on top of the derrick.) The necessary holes are drilled at the factory before shipment, anticipating future need for an extra sheave to permit use of a 5-sheave Traveling Block.

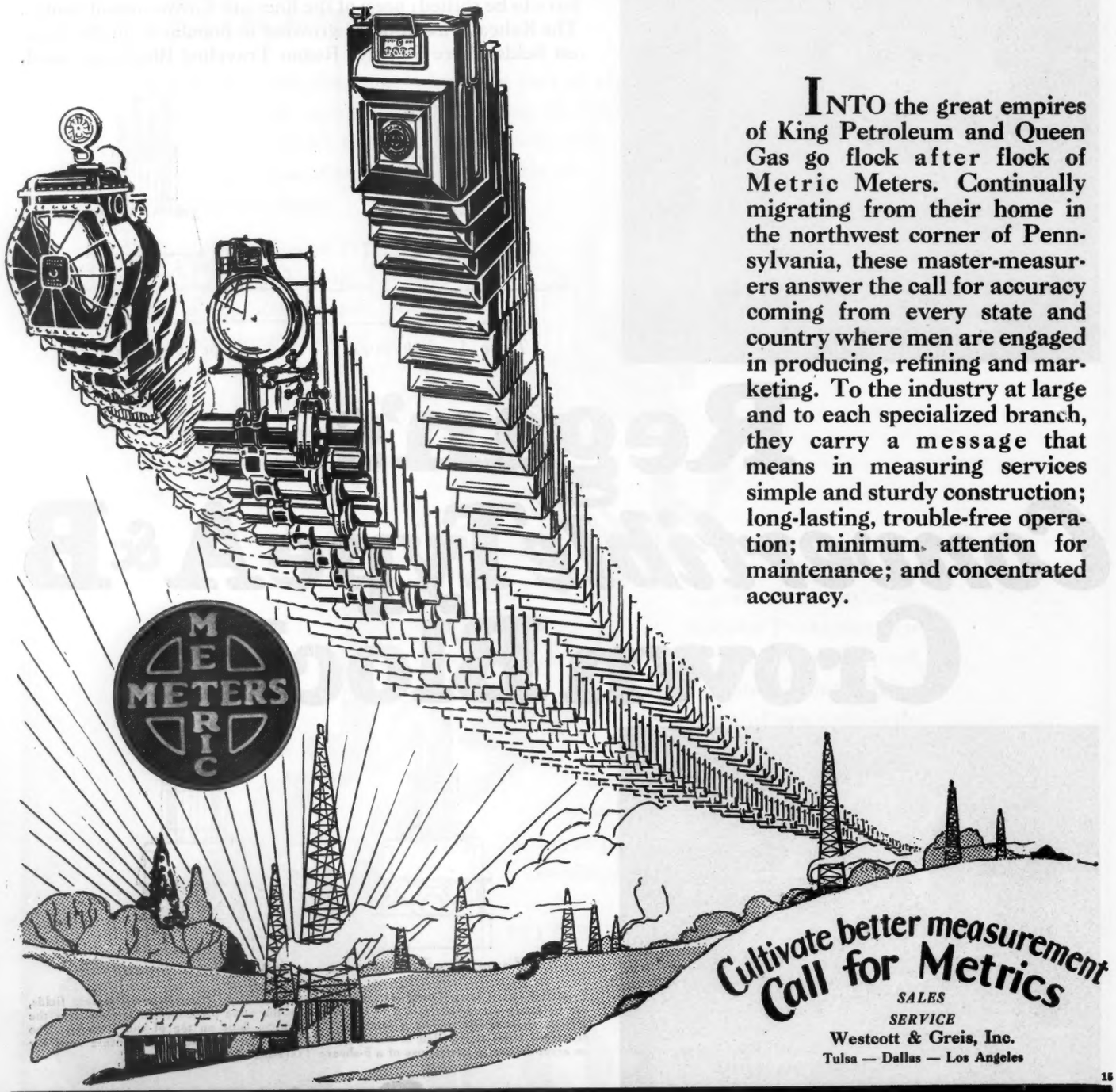
New York Office
75 West Street
Wm. Braat, Manager

Mid-Continent Office
Dallas, Texas
501-2 Marvin Bldg.

Regan
Forge & Engineering Co.
Oil Field Equipment
Plant and General Offices:
SAN PEDRO (Los Angeles Harbor) CALIFORNIA, U. S. A.

Representatives
Pecos, Texas
P. O. Box 444
Oklahoma City, Okla.
2420 W. 21st St.
Maracaibo, Venezuela
Wm. Adams,
Care Amer. Consul

Over all Gasdom *and* Oildom



INTO the great empires of King Petroleum and Queen Gas go flock after flock of Metric Meters. Continually migrating from their home in the northwest corner of Pennsylvania, these master-measurers answer the call for accuracy coming from every state and country where men are engaged in producing, refining and marketing. To the industry at large and to each specialized branch, they carry a message that means in measuring services simple and sturdy construction; long-lasting, trouble-free operation; minimum attention for maintenance; and concentrated accuracy.

Cultivate better measurement
Call for Metrics

SALES
SERVICE
Westcott & Greis, Inc.
Tulsa — Dallas — Los Angeles

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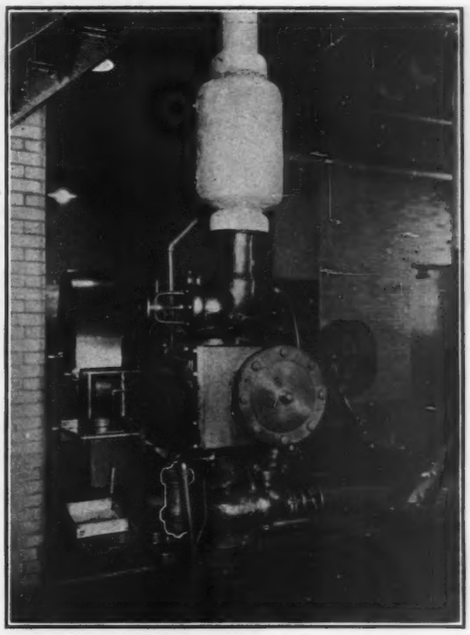
METRIC METAL WORKS
of the American Meter Company-Inc.
-ERIE-PENNSYLVANIA-U-S-A-



Put Armstrong Steam Traps on guard

YOU can depend on them to drain the condensate from your steam lines and steam heated units without the loss of live steam. They effect worth while savings in coal consumption and improve the operation of the steam units in general.

Armstrong Steam Traps provide automatic discharge of any air that tends to accumulate as well as dirt, oil and scum. They require practically no maintenance. Inspection once a year in the majority of cases is sufficient to insure continuous perfect operation.

Armstrong Traps on steam turbine and engine headers are an inexpensive and a most dependable protection against damages by water. The small size and symmetrical shape of Armstrong Traps afford simple and neat installations.

You can test an Armstrong Trap for 3 months before you decide whether or not to buy it. There is no obligation involved. Send the coupon today.

ARMSTRONG · TRADE MARK · "INVERTED BUCKET" STEAM TRAP

Armstrong Machine Works
368 Maple Street, Three Rivers, Mich.
District Representatives in 42 Cities

The No. 2S Armstrong Steam Trap is but one of many types and sizes. Armstrong Traps are made for pressures up to 900 lbs. and temperatures up to 750 deg. F.

Fill in and Mail For 90 Day Test

To _____ (Name) _____ (Firm)
_____ (Position) _____ (City) _____ (State)
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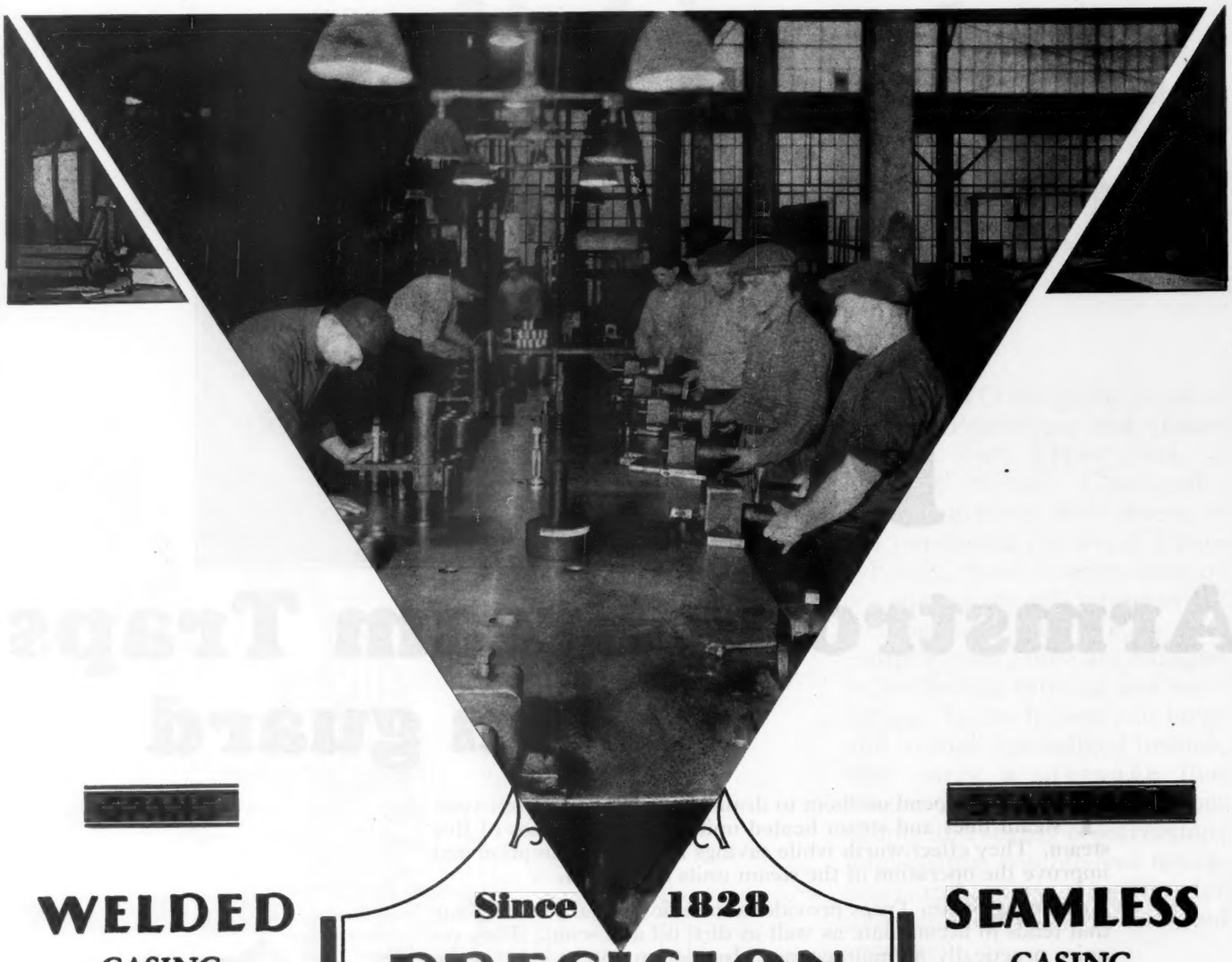
For _____ (Size and make of machine)
Size of Pipe _____ Steam Pressure (Max.) _____
☐ Send Catalog
from ARMSTRONG MACHINE WORKS
368 Maple Street Three Rivers, Mich.

OGJ 11-28 Gray



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CASING
STANDARD PIPE
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LINE PIPE
DRIVE PIPE
DRILL PIPE

Sizes ⅛ inch to 24 inch O. D.

Since 1828

PRECISION

~~ *assured by rigid inspection*

Spang Pipe is a product of pipe makers whose standards of workmanship are rigid and uncompromising.

You can benefit by their precision methods of manufacture by specifying "Spang" Welded Steel Pipe or "Standard" Seamless Pipe in your future order requisitions.

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DRILL PIPE
(Regular and Heat Treated)
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Sizes 2 inch to 13⅜ inch O. D.

SPANG, CHALFANT & Co., INC.

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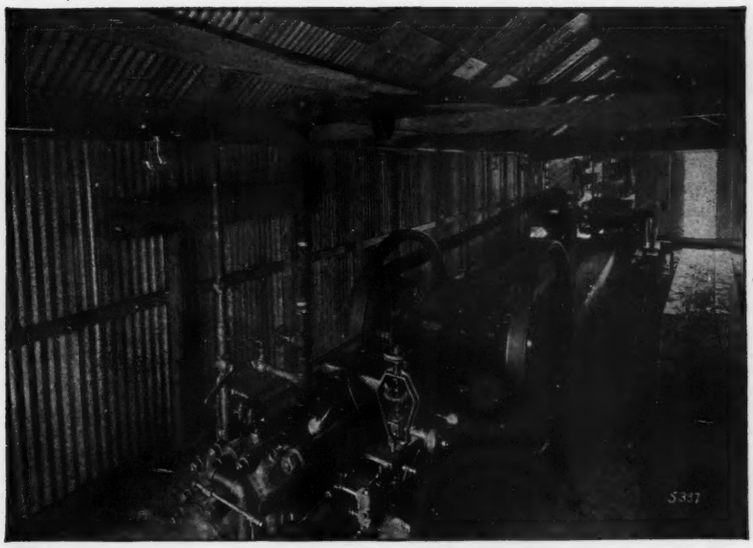
Sales Offices: CHICAGO, ILL. NEW YORK, N. Y. ST. LOUIS, MO. PITTSBURGH, PA. TULSA, OKLA. LOS ANGELES, CAL.
Welded Mills: ETNA, PENNA. SHARPSBURG, PENNA. *Seamless Mills:* AMBRIDGE, PENNA.

Franklin Valveless Oil and Gas Engines



Facts Are the Yard Stick of Value

After all it isn't talk but actual facts that tell you how good a drilling engine is—here are some facts—

J. R. Robertson of Wichita, Kansas, owns and operates two new OF 80 HP Oil Drilling Engines and two BG Clutches.

The engine shown is on its second location at Creson No. 1—¾ of a mile north of Valley Center. On this engine's first well they set 255 ft. of 15″ pipe, 1370 ft. of 12″ pipe, 2433 ft. of 10″ pipe, 2700 ft. of 8″ pipe and 3200 ft. of 6″ pipe, completing the well at 3466 ft. The well was started Feb. 3rd and finished Apr. 12th—actual drilling time not recorded. The fuel used was distillate 38-40 gravity. The average consumption was 35 gals. per 24 hours. At present Robertson's two engines are handling 9-inch bailers 60 ft. long in 10-inch holes.

Robertson says in a letter to us—"We have found this equipment to be very satisfactory for cable tool drilling, easy on belts and wire lines, also very economical on fuel and lubricating oils. Up to the present time we haven't spent a single penny for repairs on these outfits."

Franklin Valveless Engine Company
Franklin, Penna.

PRICES

40 HP Type OF Franklin, including water circulating pump and pulley. *$1550 F.O.B. Franklin*

50 HP Type OF Franklin, including water circulating pump and pulley. *$2050 F.O.B. Franklin*

80 HP Type OF Franklin, including water circulating pump, pulley and air starting equipment. *$3200 F.O.B. Franklin*

NOTE—Type OF is readily converted into type OG for gas fuelization.

Some of the Franklin OF Good Points

- Enclosed type
- Low fuel consumption
- 100% interchangeability
- Simplicity
- Piston rod is fitted with metallic packing which never needs adjusting or replacing
- Every spring exposed
- Complete simplicity with practically no adjustment
- In case of belt breakage engine automatically stops
- Fuel pump driven by eccentric running in oil bath
- Bearings are removable and reversible
- Only standard threads used. No special wrenches required
- Cylinder has 3 point, force feed lubrication
- Balance of lubrication is splash feed
- Pistons are air cooled
- All nuts subject to vibration are castillated and fastened with cotter pins
- Most economical to operate in fuel, lubricant, water and repairs
- Easy to start

Type BG Clutch for Cable Tool Drilling or Pumping

- A vast improvement over the former type of clutches.
- Driven from pulley on engine. Permits the use of a larger diameter pulley and makes possible a slower clutch speed. Operates by hand lever on derrick.
- Construction and design prevent Reverse Clutch Troubles.

PRICE—$1200.00 F.O.B. Franklin, Penna.

Distributed by

OIL WELL SUPPLY COMPANY

Branches in All Oil Fields

Gas vacuum line of Naylor Pipe at St. Louis, Oklahoma. 40'0" joints, 16" diameter.

Lowest Cost Per Foot In The Ground

NAYLOR PIPE costs less per foot in the ground than any other pipe carrying standard weight wrought pressures. No other pipe can be laid as cheaply.

Naylor Pipe is the lightest of all pressure pipe. It weighs only half as much as standard weight wrought pipe.

This light weight is a money saving advantage. It means half the freight to pay; half the weight to haul; half as many men needed for handling in the field; speedier laying. These advantages lower your pipe line costs.

Besides light weight, Naylor Pipe is also made of Toncan Iron for greater resistance to rust and corrosion. Longer life of the pipe means fewer renewals....consequently, lower maintenance costs.

Lay your next pipe line at the lowest cost per foot in the ground. Naylor Pipe will help you to do it.

NAYLOR PIPE COMPANY, MAIN OFFICE and PLANT, 1230 EAST 92nd STREET, CHICAGO

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MONTREAL, CANADA
Mechanical Equipment Company,
New Birks Building

TONCAN COPPER
Naylor Pipe
Mo-lyb-den-um IRON

Standardized Naylor Pipe is made in sizes 6" to 12" I. D. and 14" to 20" O. D. in any uniform length desired up to 40' 0". Ends made to wrought pipe standards for all types of coupling.

Where corrosion resistance is not a factor, Naylor Pipe can be furnished in steel.

Toncan Copper Molybdenum Iron is a development of Central Alloy Steel Corporation, the world's largest and most highly specialized alloy steel producers. It possesses a superior corrosion resistance, making it the favored pipe material.

AXELSON MACHINE COMPANY
Sucker Rods, Pull Rods, Working Barrels, etc.

BEAUMONT IRON WORKS COMPANY
Dreadnaught Rotary Drilling and Pumping Equipment

FRICK-REID SERVICE RUBBER BELTING
Our Own Specifications

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Oil Country Boilers and Tanks

JONES & LAUGHLIN STEEL CORP.
Tubular Goods, Seamless and Lapwelded

NATIONAL TRANSIT PUMP & MACHINE CO.
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J. P. RATIGAN
"Sure-Grip" Line of Pumping Equipment

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Two and Four Cycle Gas Engines, Pumping Powers, Refinery Equipment

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Fittings and Valves for all Branches of the Oil Industry

WHITLOCK CORDAGE COMPANY
Manila Cordage, Including Drilling Cables, Bull Ropes, Cat Lines, etc.

ECONOMY through QUALITY

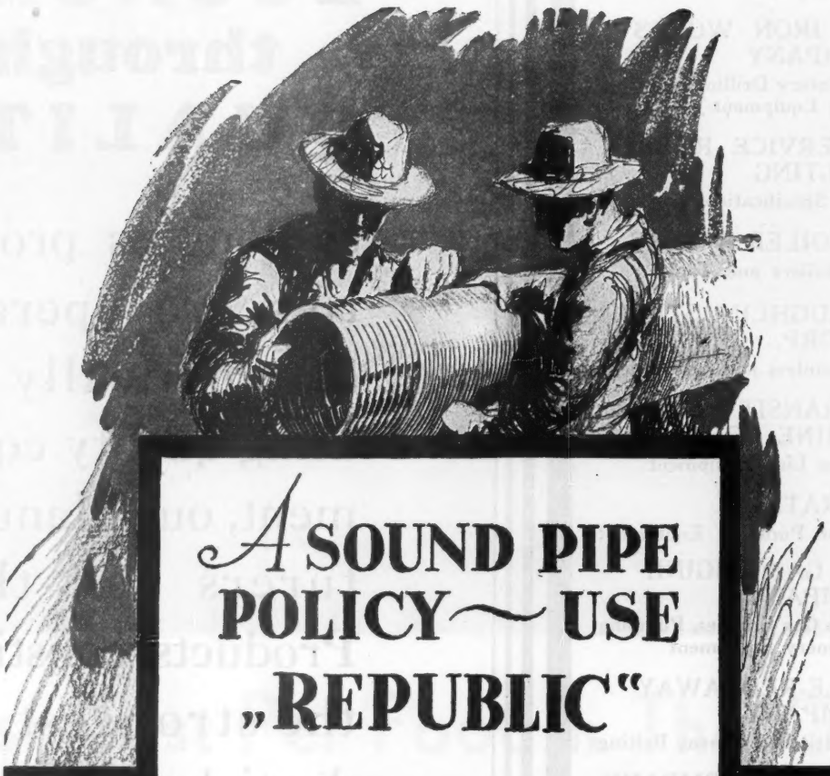
So long as properties are operated economically by using quality equipment, our Manufacturers and their Products constitute the strongest credentials ever offered by any supply company as a bid for business.

IN OUR CONVENIENTLY LOCATED AND FRIENDLY STORES
THESE "QUALITY PRODUCTS" ARE AVAILABLE

FRICK-REID SUPPLY CORPORATION

COVERS THE FIELD WITH WELL MANAGED STORES FROM THE ROCKY MOUNTAINS TO THE ATLANTIC COAST

Pittsburgh - - - - - - - Tulsa



A SOUND PIPE POLICY—USE „REPUBLIC"

It's a safe, sound and economic policy to standardize on Republic tubular goods in the oil and gas fields.

The name Republic on steel pipe and casing guarantees uniformity, high quality of material, clean threads well protected, and general excellence of workmanship.

Adherence to rigid standard specifications backed by a rigorous system of tests and inspections makes it practically impossible for inferior products to pass to the market from Republic mills.

Thus, Republic gives *you* the most protection by protecting itself. Use Republic pipe and casing for constant satisfaction.

PRODUCTS

Tubing
Casing
Line and
Rotary Drill
Pipe

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Buffalo
Chicago
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REPUBLIC
IRON & STEEL CO. YOUNGSTOWN O.
PIPE & CASING

THE WORLD'S MIGHTIEST BLOWS

EXEMPLIFY THE GUIBERSON UNDERREAMER...

THE DESCENDING TRUNK OF AN INFURIATED ELEPHANT carries swift death to the native beneath. Undreamed of might resides in the supple trunk of this agile monster.

THE DESCENDING HEAD OF THE GUIBERSON UNDERREAMER brings with it the rigid construction of massive parts which makes the mighty, pounding blows of this master tool the talk of the oil fields. The down-thrust bearing surface is three times greater than that of any other underreamer on the market. Oversize cutters taper into the body with a dove-tail fit and are secured by both bolt and mandrel. Head and tongue are forged from a solid steel billet, positively preventing the insides from pulling out. The spring is stronger than any ever put in an underreamer. The GUIBERSON UNDERREAMER stands a longer and faster stroke hour after hour and day after day without displaying any of the characteristic underreamer weaknesses. *Fully Patented.*

"Better Be Safe Than Sorry"

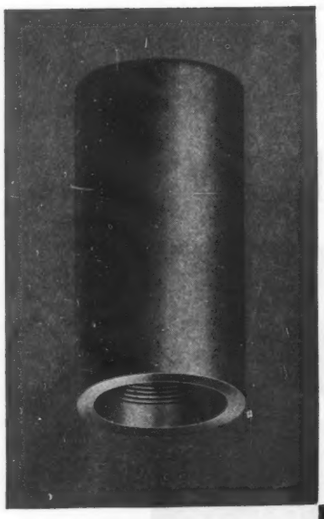
THE GUIBERSON CORPORATION
Box 1106, Dallas, Texas
California Branch: 1506 Santa Fe Ave., Los Angeles
621 Kennedy Bldg. TULSA | 321 S. Osage St., PONCA CITY | 506 Trust Bldg., NEWARK, O.

4

of a series describing the "World's Strongest Underreamer."

GUIBERSON

BETTER BE SAFE THAN SORRY



To Assure Dependable Performance

BAASH-ROSS TOOL COMPANY

Uses Nickel Alloy Steel for Rotary Tool Joints

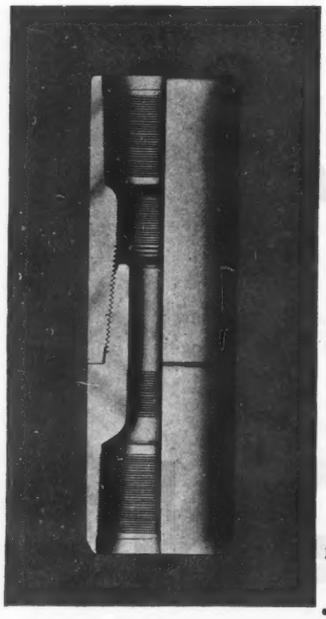
S. A. E. 2335 Nickel Steel Rotary Tool Joints manufactured by BAASH-ROSS TOOL COMPANY, *Los Angeles, Calif. Box end is shown above and pin end at right.*

Dependable materials are the best assurance of dependable performance

IN deep well drilling practice, tool joints must possess dependable strength in order to withstand the heavy loads placed upon them by the excessive weight of the drilling equipment. Dependable toughness is also essential, since these parts are subjected to severe shocks, impacts and stresses during drilling operations.

Extensive tests have shown that the average, maximum and minimum values of Nickel Alloy Steels vary less from heat to heat than other commercial steels. In the manufacture of machinery, where it is impractical to test the individual properties of each piece of steel used, this feature is particularly important.

Probably the most impressive evidence of the uniformly dependable mechanical properties of Nickel Steel parts is the fact that practically all manufacturers of airplane engines, both in America and Europe, have adopted Nickel Alloy Steels for highly stressed parts, the weight of which must be pared to a minimum.



Baash-Ross Rotary Tool Joint showing box and pin assembled.

SEND FOR "BUYERS' GUIDE TO NICKEL ALLOY STEEL PRODUCTS"

Nickel
FOR ALLOY STEEL

INCO NICKEL THE INTERNATIONAL NICKEL COMPANY, INC., 67 WALL STREET, NEW YORK, N. Y. INCO NICKEL

RESULTS *Are What* COUNT

. . . and, as you know, maximum results cannot be obtained when trusting too much to the element of luck—you must have the right equipment. ALCO Core Drills are the "result" of years of experience in the manufacture and servicing of coring equipment, and have proved their value.

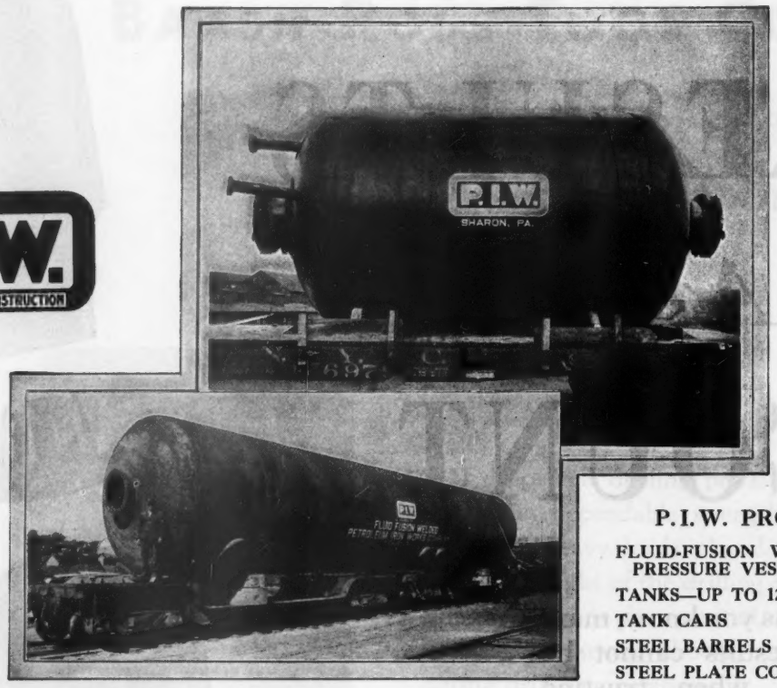
Oil companies who choose their coring equipment strictly on the basis of results produced, use Alco Core Drills for their efficiency, reliability and the capacity to render long service under all conditions.

ALCO OIL TOOL CO., Inc.

P. O. Box "A," Compton, Calif.
Taft—Ventura—Kettleman Hills
HOUSTON, TEXAS
OKLAHOMA CITY, OKLA.

Above—The cutter body sub, regular core catcher and the type "A" cutter head of Alco Coring Equipment. A special core catcher for soft formations may be had if desired.

Above—Section of a core room showing the "results" of Alco Coring in a number of different formations.



P.I.W.
STEEL PLATE CONSTRUCTION

P. I. W. PRODUCTS

FLUID-FUSION WELDED HIGH PRESSURE VESSELS
TANKS—UP TO 120,000 BARRELS
TANK CARS
STEEL BARRELS AND DRUMS
STEEL PLATE CONSTRUCTION

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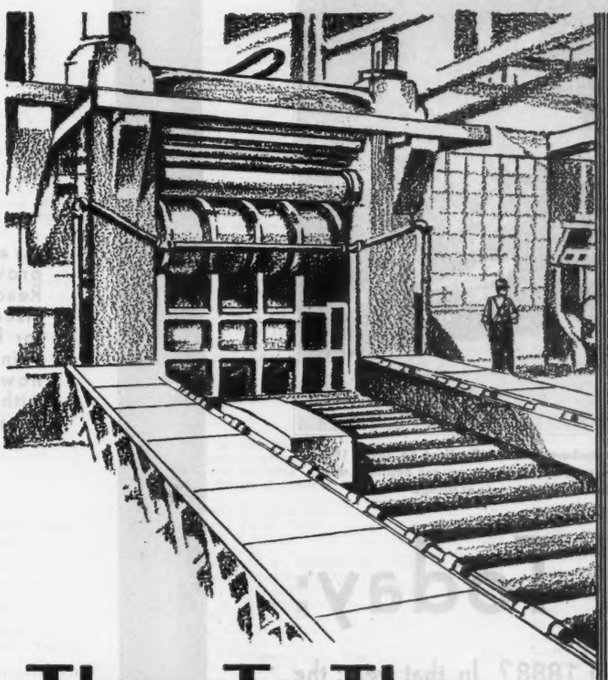

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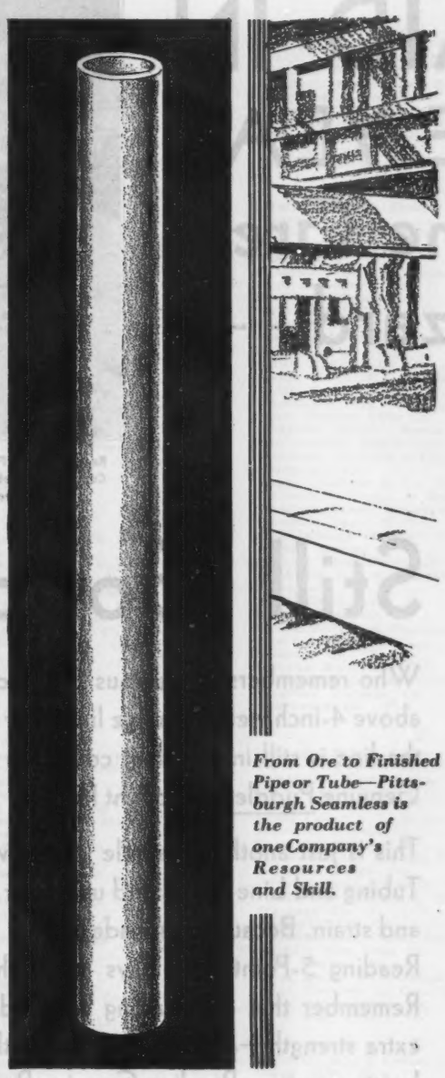

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The Oil and Gas Journal

PRODUCING REFINING ENGINEERING MARKETING

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Refinery Section Starts on Page 131

Production Gain Is Due to New Wells

Highest daily average estimated total production in 1928, week ended Dec. 29, 2,585,844 bbls. Lowest in 1928, May 19, 2,338,241 bbls.

Output for Country as Whole Balances Consumption. Determination Apparent to Keep Agreements Effective

By Andrew M. Rowley

Highest daily average estimated light oil production in 1928, week ended Dec. 29, 2,158,134 bbls. Lowest in 1928, Mar. 3, 1,927,713 bbls.

Completion of a number of large wells in different fields in California, especially at Santa Fe Springs, increased production of that State an average of 23,500 barrels daily last week which was reflected in a gain in output for the country as a whole. Production in Oklahoma still remains below the figure permitted under existing conservation agreements, despite the bringing in of wells of the gusher type at Oklahoma City.

The demand for crude oil during September averaged 2,994,500 barrels daily and requirements at this time would not be much different from that figure as crude oil consumption does not vary to any material extent between September and December. Crude oil imports during September averaged 232,000 barrels daily. With production in the United States being held below 2,650,000 barrels daily, supply and demand are in practical balance. Crude oil is being withdrawn from storage in some areas.

Continuance of the present improved situation dedends entirely upon a 100 per cent co-operation in keeping conservation agreements absolutely effective. Any deflection in any area undoubtedly will mean a drastic price reduction in that section. Conservation is of such vital importance to the industry as a whole there is a strong sentiment against permitting any pool or field to menace the general situation with resultant starvation prices for all. Producing crude oil at prices which are below the cost of bringing that oil to the surface in many fields is economic waste and leaders of the industry seem determined that those responsible for such conditions should be the ones to suffer from price reductions, rather than have these "below-cost" prices apply to all areas.

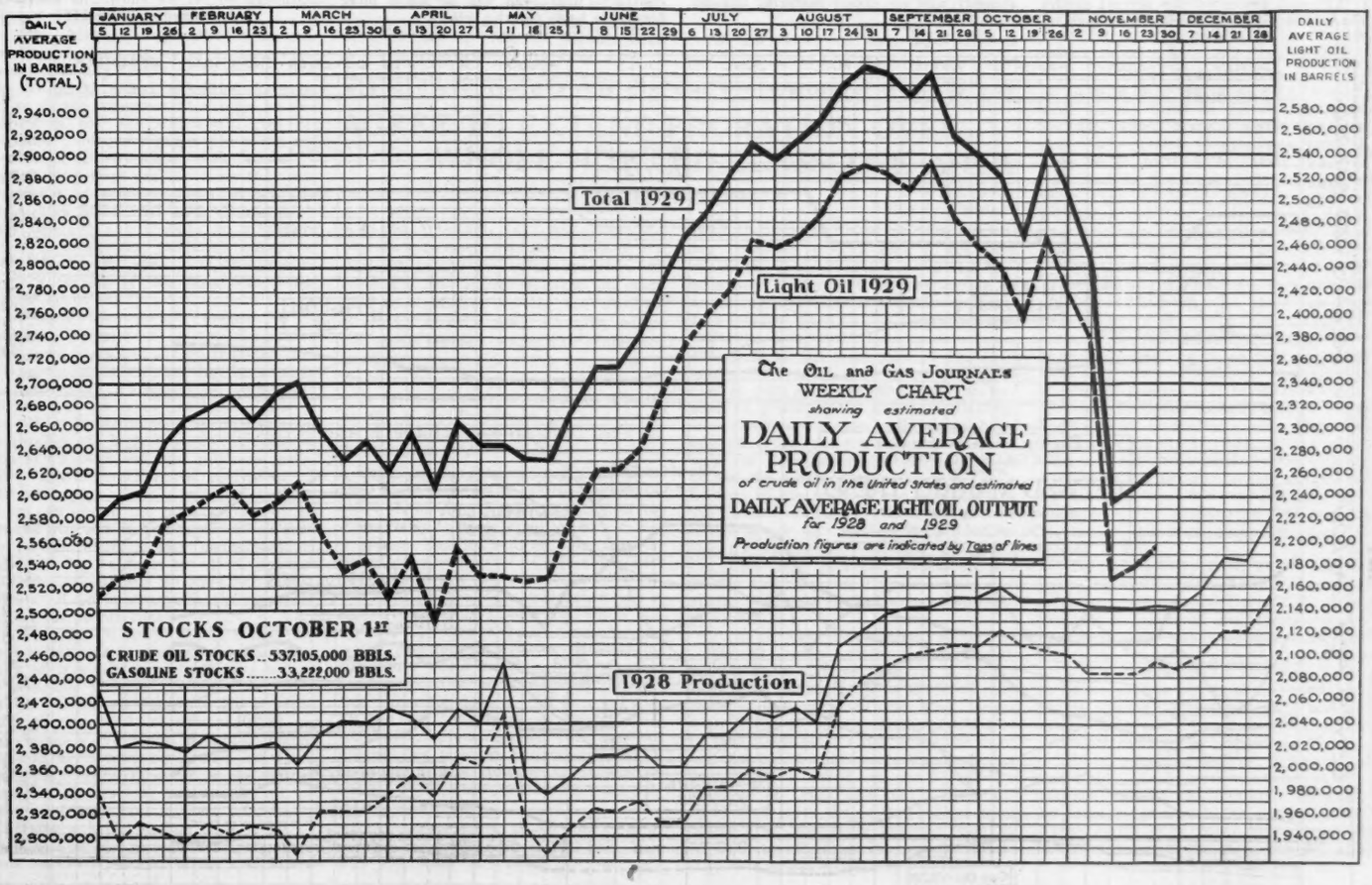
Conservation undoubtedly will receive considerable attention at the annual convention of the American Petroleum Institute at Chicago next week and it is expected and believed leaders of the industry will voice their approval of what has been accomplished and vote to continue these efforts as long as overproduction threatens.

PRODUCTION IN THE UNITED STATES

Estimated daily average production of light and heavy gravity oil in the United States for week ended November 23, and a comparison with the previous week follows:

	Nov. 23		Nov. 16	
	Light	Heavy	Light	Heavy
Oklahoma—				
Oklahoma City	64,115	.....	57,655	.....
St. Louis-Pearson	52,560	.....	50,585	.....
Seminole	228,510	.....	238,310	.....
Northern Miscellaneous	239,340	.....	241,270	.....
Southern Fields	57,890	.....	57,675	.....
Total Oklahoma	642,415	.....	645,495	.....
West Texas—				
Hendricks	106,290	.....	108,745	.....
Yates	142,947	.....	143,505	.....
Remainder	113,914	.....	115,830	.....
Total West Texas	363,151	.....	368,080	.....
North Louisiana	30,915	5,510	30,985	5,575
Arkansas	18,850	45,115	17,880	45,345
North Central Texas	145,094	.....	146,095	.....
Texas Panhandle	102,539	.....	100,015	.....
East Central Texas	17,674	.....	17,859	.....
Kansas	110,320	.....	109,410	.....
Total Mid-Continent Area	1,430,958	50,625	1,435,819	50,920
Gulf Coast	.....	187,220	.....	190,456
Southwest Texas	.....	59,907	.....	61,505
Eastern	134,000	.....	135,000	.....
Rocky Mountain Area	71,642	.....	72,257	.....
California—				
Santa Fe Springs	160,000	.....	150,000	.....
Long Beach	108,000	.....	112,000	.....
Huntington Beach	41,000	.....	41,000	.....
Elwood	35,000	.....	27,500	.....
Ventura Avenue	54,000	.....	51,000	.....
Seal Beach	27,500	.....	22,000	.....
Remainder of State	136,500	131,000	134,000	132,000
Total California	562,000	131,000	537,500	132,000
Total United States	2,198,600	428,752	2,180,576	434,881
Grand Total		2,627,352		2,615,457

Total Increase 11,895 Bbls.; Light Oil Increase 18,024 Bbls.


DAILY AVERAGE PRODUCTION IN BARRELS (TOTAL)
DAILY AVERAGE LIGHT OIL PRODUCTION IN BARRELS
JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER
Total 1929
Light Oil 1929
1928 Production
The Oil and Gas Journal's WEEKLY CHART showing estimated DAILY AVERAGE PRODUCTION of crude oil in the United States and estimated DAILY AVERAGE LIGHT OIL OUTPUT for 1928 and 1929
Production figures are indicated by Tops of lines
STOCKS OCTOBER 1ST
CRUDE OIL STOCKS...537,105,000 BBLS.
GASOLINE STOCKS.....33,222,000 BBLS.

Refiners Discuss Fuel Oil Contracts

Oklahoma Operators Expect to Secure Better Agreements With Railroads for 1930. Reduce U. S. Motor Gasoline Prices

By C. O. Willson

With few developments of special interest in the spot market the principal subject of discussion in the Oklahoma (Group 3) refined market centers around the fuel oil contracts with railroads for 1930. Many of these contracts expire next month and buyers and sellers are now endeavoring to get together on a contract which will be satisfactory to both during the coming year.

In the spot market fuel oil continues to be one of the strongest products. In contrast U. S. Motor gasoline has shown no improvement in a generally weak situation which has prevailed for several months. The larger refiners who have been quoting 7½ cents to the trade reduced their price to 7¼ cents last week. This reduction has no significance so far as the spot market is concerned because the new price is still from one-quarter to one-half cent above the prices at which most of the spot sales are being made. It is important, however, to jobbers who purchase on contracts based on published prices.

Despite the weakness in the principal domestic grade, the high gravity grades of refinery gasoline are holding their own. There is relatively little material available in excess of export shipments being made on contracts and with a fair demand price concessions in the 400, 390 and 375 endpoint motor fuels are rarely reported.

Kerosene, the "weak sister" of the Mid-Continent market for several weeks, has shown no improvement and prices are lower, the 41-43 water white grade being freely available at a price range of 4¼ to 4¾ cents. Furnace oil distillate and gas oil are unchanged in price range with a fair demand.

Although prices on the several grades changed during the week, quotations on natural gasolines Tuesday were practically the same as on the same date last week. No large orders have developed but the regular outlets have been buying steadily and no excess material has accumulated.

Negotiations now under way between representatives of southwestern railroads and some of the larger refiners in Oklahoma and Kansas indicate that fuel oil contracts next year will be on a more favorable basis for the sellers.

REFINED MARKET BAROMETER

A seasonal slump in domestic consumption is being reflected in lower prices for refinery gasolines at a few points although quoted prices were generally steady. There has been no general action to reduce output in line with the smaller consumption and in some cases refiners are securing outlets with substantial price concessions. The higher gravity grades of gasoline suitable for export are stronger than the domestic grades. Natural gasoline prices were firm both in the Mid-Continent and California. The kerosene market is weak and prices lower except at some of the coastal refineries where prices are steady. The demand for furnace oils is showing a substantial increase over last year but the supplies up to the present time are adequate and no price advances have materalized. Fuel oil and gas oil unchanged. Among the lub stocks, bright stock prices are lower both in Pennsylvania and the East Coast but prices continued firm in the Mid-Continent. Wax market inactive and prices unchanged. More activity in export market both for gasoline and kerosene.

Mid-Continent—Domestic grades of gasoline weak and tank car prices lower in Oklahoma, Kansas and North Texas. Kerosene prices lower in some areas. Fuel oil strong. Gas oil steady. Good movement of furnace oil with supply plentiful. Natural gasoline prices unchanged. Neutral oil strong. No change in bright stock and wax. Export movement of high gravity gasoline keeps prices steady.

East Coast—Market generally firm with exception of lubricating oils. Bright stocks and some grades of steam refined stocks lower. Less disposition to reduce gasoline prices with heavy demand considering season. No change in kerosene prices. Strong undertone in furnace oil market. More inquiries for gasoline and kerosene in export market.

Pennsylvania—Gasoline and naphtha weak and prices lower on several grades. Minor changes in neutral oil and steam refined prices. Bright stock prices lower. Kerosene slow.

Chicago—Gasoline market slightly firmer first of week after wave of selling last week at lower prices. Kerosene inactive and prices lower. Good demand for low cold test grades of fuel oil, gas oil and furnace oil. Bright stock prices lower.

Gulf Coast—Better tone in neutral oil and prices on some grades higher. No change in other products.

Spot fuel oil prices over the past two years have been relatively low, a reflection of an excess crude oil supply. The Mid-Continent market during this period has been more or less dominated by the large supplies originating from the West Texas development. The West Texas crudes compared with Oklahoma, Kansas and North and Central Texas are relatively low in gravity and in skimming operations such as characterized the early refinery operation this resulted in the bulk of the refinery output being fuel oil. This fuel oil was forced on the market of the Middle West and Southwest with little regard to price.

This situation was reflected in prices prevailing in other Mid-Continent refinery groups, although during this entire period there were no large supplies available from Oklahoma, Kansas and North Texas refiners. This spot market situation brought low prices in long time contracts and last year refiners had to be content with agreements which resulted in the bulk of their fuel oil being sold to railroads at prices which were relatively low in comparison to prevailing crude oil schedules.

Over the past few months there has been a gradual improvement in the spot market for fuel oil due to a correction of the conditions which were responsible for the demoralized market. The expansion of cracking facilities, the shutting down or curtailment at some of the skimming plants in West Texas, coupled with a stronger crude oil market due to the large pipe line outlets to the coast, has eliminated the cheap sources of supply.

Mid-Continent refiners now believe that the time has arrived for a return to normalcy in contracts with railroads. Although so far as known no contracts

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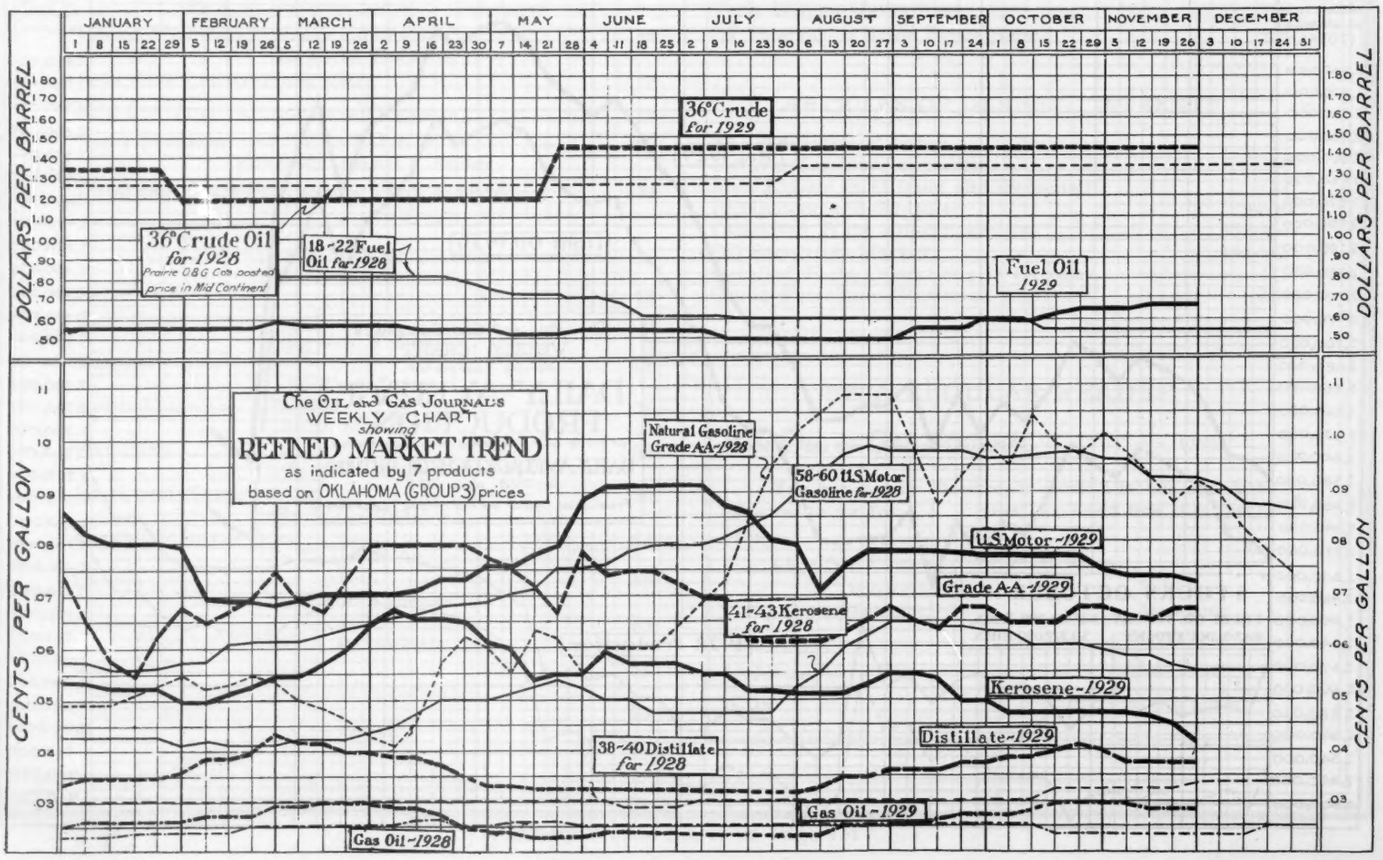

Wilbur Says Oil Industry Can Help

Improved Position of Petroleum Business Will Assist in Maintaining Uninterrupted Progress of the Country

By Charles E. Kern
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Nov. 25.—"While little has been said in respect to the oil industry in connection with the recent plans for continuing sound business activities, a careful analysis of the situation that confronts the country will show that as much can be accomplished by improving methods of production and refining and in the distribution of the products of petroleum as is possible in any other branch of industrial activity," said Dr. Ray Lyman Wilbur, secretary of the interior and chairman of the federal oil conservation board, in reply to a question by the writer.

"The more we study American industry, the more impressed are we with the basic nature of petroleum in supplying heat, power and lubrication. Indeed, it is difficult to envisage any single industry that quite equals that which deals with petroleum and its products which is so greatly depended upon to move the wheels of industry and commerce. The more basic an industry is, the more important it is to turn our attention to facilities for increasing its usefulness.

"There is a tendency today to forget the petroleum industry as one that needs progress steadily since much has been said about the waste of overproduction. In a general sense there is an inclination to feel that it should be slowed down. This is a superficial point of view. The petroleum industry needs to go along with other forms of manufacturing and production.

Economic Production

"The objective of the discussions concerning the importance of keeping business advancing evenly, is to provide economically that which is needed and pass it on to the consumer at a price he can afford to pay and which will give the producer adequate profit to encourage continued effort. This contemplates a satisfactory wage scale in order that consumption of products shall be kept up to a high level. All such efforts dovetail together and operate as a perfect piece of machinery, producing happy results for every one. Any interference with a portion of this plan defeats the entire operation.

"I have been greatly encouraged to see that in spite of all the difficulties that have harrassed the oil industry that an enormous investment has been made by putting in machinery to obtain the highest results from cracking. This is merely a better method of utilizing oil to produce the largest possible amount of one of its most essential products, gasoline. Better cracking is equivalent to the production of more crude oil because if we can obtain the same amount of essential products from a barrel of oil that we obtain under cruder methods, from two barrels, we have in effect, doubled the production while we have left a vast amount of oil in storage in the earth for use at the proper time.

"We must recognize the fact that the vast investment in cracking operation has back of it a selfish, as well as a broadly economic purpose, because it adds profits to the oil industry. No one objects to that kind of selfishness. If we can broaden our vision of the oil industry and apply to every branch the same principle that is involved in the refinements of the cracking process, the oil industry will serve its highest purpose in supplying a basic product as a profit to itself and at the same time, vastly promote maintenance of many industries that are dependent upon it. In fact it is difficult to imagine any industry that is not in some way dependent upon some of the products of petroleum.

Control of Development

"We have just finished signing up a number of documents in the Kettleman oil field with the object of controlling the development there for the ultimate benefit of everyone. All that is being done there is for the purpose of getting the most out of the field.

R. L. Wilbur

"The recent drastic measures that have been taken by oil companies in certain California fields by curtailing the price of crude oil, in order to discourage its wasteful production at a time when it is not needed, certainly indicates the earnestness that is inspiring men who are attempting to solve that problem in California.

"I am convinced that the conservative and constructive forces of the oil industry are more and more exhibiting a keener desire to solve their own problems. Naturally the oil men are a good deal like the farmers when they get drowned in overproduction, they are inclined to yell to somebody in Washington to throw them life preservers, but this is a passing phase in the oil industry.

"The real difficulty from a national standpoint is in the fact that so much of the oil land is in private hands it has become a state problem. While a state problem it is a regional problem as well.

"We would be assisted very much if we could consider oil from the standpoint of geology and the geologist. Millions of years ago nature created these oil deposits and now we come along and place them under separate political jurisdictions. The essential thing is that this oil is in the United States and our good fortune is in the fact that it is accessible for the use of all our people. However, when we come to utilize the oil we find it is necessary to deal with a myriad of owners, each acting under the influence of the universally bad habit of thinking of himself first. This leads each one to feel that, regardless of all others who share ownership with him, and regardless of the needs of a hundred million people in our own country alone, he is justified in pursuing his individual interest as it appears to him at the moment instead of taking a broad economic view of what is best for himself and everybody else.

New Leadership

"I am convinced that leadership is springing up in this industry which does not approve of that narrow, unwise and selfish view. The oil is produced in half a dozen states, while it is needed and is being consumed in 48 states. One need not be very far sighted to see that this fact creates a condition that should be dealt with wisely. This distribution does not disturb us at the present moment when the volume of oil is so great as to cause it to be thrown on the market everywhere at cheap prices, but we should consider the time that is bound to come when this flush period is over, when greater expense of production and the natural effect of a smaller supply to provide for a larger demand will affect the national viewpoint.

"It is not in my mind to do more than to ask other people to consider the operation of political thought in such an emergency. Experience has shown us that political thought in the nation at large is dominated by majorities and we know the power that a majority in congress can exercise. Everyone can reason it out for himself. Petroleum produced in half a dozen states, urgently needed in 48 states, so that a preponderance of votes will be from political divisions that do not produce a barrel of oil and whose citizens are the consumers of nearly all of it.

"Coercion emanating from the Federal Government as a part of the conservation of petroleum would be evidence of a failure of intelligent co-operative handling of the oil industry. To my mind it would change in an important way our whole conception of the oil industry. However, I cannot fail to anticipate criticism that will confront the oil industry in the years to come. It is not for me to say what the results might be. It is for the responsible men in the industry to draw their own conclusions.

State Compact Idea

"What I have said is largely responsible for my belief in the state compact so that these fortunate states in which there is a wealth of petroleum may be able better to care for their interests now and in the future. If we did no more than to bring California, Texas, Oklahoma and New Mexico into the adoption of uniform plans these four commonwealths might readily solve the major problems involved in the production of petroleum. Fortunately, many of our states are learning that their interests are intertwined. They are gradually learning to work together. There was a time when men were so individualistic that they were incapable of comprehending the advantages that come from organization. Each one thought that he could supervise his own affairs without the intereference of others, fearing that association would work against him without conferring any commensurable advantage. He depended upon his own initiative and industry. Now combination has gone so far as to dominate many branches of human activity.

"The oil industry itself knows that it can successfully operate only with a complicated organization. Even if some individual is dominant, his power must be exercised through organization. The state compact is only a broadening of this principle of organization and there seems to be no reason why it should not operate in solving oil problems as it has operated in solving in various communities problems relating to irrigation.

"State compacts became necessary in developing our larger irrigation projects because without the interstate compact, no large project could be made feasible. These states have begun to understand the advantages of the state compact and

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AGREE TO EXTEND PRORATION OVER WHOLE HOWARD-GLASSCOCK AREA

By L. E. Bredberg

FORT WORTH, Tex., Nov. 23.—At a proration meeting held here, representatives of practically every operator and company, and representatives of every pipe line company serving the Howard-Glasscock County pools, virtually ironed out every problem which has confronted the producers and pipe line companies in these pools since the opening of the 2½-mile extension over in Glasscock County by the Kirby Petroleum Co. and others on their lease in Section 23, Block 33, Township 2s.

Prior to the discovery of that extension where large wells are the general instead of the special rule, proration of the other fields in these counties was rather a simple matter, and at one time the companies and Railroad Commission were of the opinion it might be dispensed with, for many of the wells had fallen off to almost nothing in production, while others were making a great percentage of water, and it was believed the pipe line companies could handle all the present production. But M. B. Sweeney, production superintendent of the Sun Oil Co., Dallas, Tex., chairman of the advisory committee, presiding at the meeting, opened the meeting by stating that it looked as if the Howard and Glasscock County Pools had a greater need for proration than ever.

The average daily production limit at present, for the pools, is 37,500 bbls. This was previously established by the Railroad Commission. Most of this is coming from the eastern side of the field where the crude is of lower gravity, consequently selling for less, but spoken of as having higher refining qualities, therefore making the pipe line companies and refineries more profit than crude oil purchased from the west side of the field where the gravity runs up to 33 degrees and is selling for $1.06 at the present scale of prices posted for these counties. The difference in the refining qualities of these crudes and the difference in price paid for them is causing the companies to run the cheaper crude and refuse connecting to the wells in the west side of the field, consequently those wells were cut to 40 per cent of their daily possible. the first 10 days of November, and when the three small gathering lines could not handle this amount, they were reduced again, this time to 25 per cent of their possible.

Price Suggestion

The 33 gravity crude oil is now selling for $1.06 a barrel, and Dr. A. Wade Schwitalla, manager of the crude oil purchasing department of the Shell Petroleum Corp., said his company would like to take 8,000 bbls. a day from the field, but that he thought prices should be cut from $1.06 a barrel on the 33 gravity crude to 96 cents, and that 2 cents instead of 4 cents should be paid for each degree over 29.9, crude running from 26 to 28.9 maintaining its present price.

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Outlook Bright for Petroleum Industry

Stabilization Achieved Through Conservation Insures Prosperity. Will Spend Vast Sums During Coming Year

Stabilization of the petroleum industry by bringing into practical balance supply and demand of crude oil makes the outlook for the oil business brighter now than it has been at this period of the year for many years. Conservation movements made effective in the different flush production areas of the country have resulted in the output of crude oil being held to market requirements. This condition obviates any necessity for readjusting the crude oil price schedule. Stability of the price structure is a most important factor both to the producer and refiner of crude oil as it permits both to plan their operations for the future without fear of encountering wide fluctuations in price.

Drilling operations are not affected by the conservation movements which cover only production from different pools.

Speaking for producers it may be said that there is a better feeling among them at the beginning of this winter than there has been in four years. Those of them who are spending from $100,000 upwards for drilling wells are doing so in fields that promise large returns. The tremendous bills for material and supplies and the big labor costs do not deter them. They are getting accustomed to this new deal in the oil business and realize that when these 6,500 and 8,500-foot levels are drilled up they will be face to face with even greater expense in the exploration of the 10,000-foot levels.

The business of producing oil is becoming more costly every year. There is more material in one well in Oklahoma City, or Logan County, or Santa Fe Springs, drilling or producing, than in 20 wells in the rich old fields of Washington County, Pennsylvania. Greenlee & Forst got a 12,000-bbl. well in the old McDonald, Pa., Field at a cost of say $5,000 back in the earlier days of the industry. Operators are getting 12,000-bbl. wells in Oklahoma City but are paying from $110,000 to $160,000 for them.

Cost Increase General

When the oil industry was entering the winter of 1928 the production departments, while almost as active as they are at the threshold of the winter of 1929, were not faced with the expense which confronts the producer at this time. Last November, for example, three wells were drilling in Oklahoma County in the State of Oklahoma. It cost perhaps $500,000 to complete those three wells. One of them opened the Oklahoma City Pool in December. Now there are 156 wells drilling in the same area and it will cost over $19,500,000 to drill them. One of these wells in Cleveland County is drilling below 7,200 feet and has thus far cost over $180,000.

In California the number of wells drilling at this time and in November last year is about the same, but in the Santa Fe Springs Field, the largest producing pool in the State, there were 175 wells drilling at the last report as against 158 at the same time in 1928, and they will be sent to depths ranging from 7,000 to 8,000 feet. There are 33 in the Midway-Sunset Field as against nine a year ago and 31 in the Kettleman Hills district, the most expensive operating area in America, which was not even classified last year among the segregated drilling zones. The cost of drilling the average deep well in the Los Angeles Basin Fields runs over $150,000, which is higher than ever before in the same district because of the greater depths.

Another expensive part of the country in which to operate, but in which one or more great fields may be developed, is Lea County, New Mexico. It is wildcat territory yet, and the wells are costing around $106,000 to complete.

Deeper drilling in the Gulf Coastal Fields, and the development of new salt domes in that area are necessitating the expenditure of greater sums of money per well than have ever been invested before in that territory, and the same may be said of the Southwest Texas territory, which started off as a relatively shallow sand field but now is being developed with deeper levels as an objective, and at considerably greater expense.

New Material in Old Fields

Even in the very old Bradford-Allegany area in Pennsylvania and New York operating expenses have gone sky high. Not only are they drilling wells a mile deep in the northern part of that area in an effort to find the Medina sand and big gas production, but they are spending large sums on drilling closely spaced wells both for water-intake and oil wells; for compressors, water pumps, water filtration plants, water tanks, electric light and power outfits, and other paraphernalia not dreamed of in the old days of that field, and to a greater extent than last year when five-spotting was in its infancy. Much of the drilling in the North Louisiana and Arkansas Fields is going deep and at added cost because the upper horizons have been explored pretty thoroughly and the future of the two States lies in what may be discovered at great depths. In Kansas the exploration of the central and western counties of the State has only begun, but the wells are costing the owners more money than wells in any other part of the State. It cost over $50,000 to complete a well in the Valley Center Pool in Sedgwick County and wildcat wells in western Kansas run much higher.

More Wells Drilling

As the industry goes into the winter of 1929 its drilling program calls for more wells than that of last fall. At the beginning of November, 1928, there were 3,795 wells drilling in the fields east of California, while on the same date this year there were 4,007 wells drilling. On November 1, 1927, there were 3,457 wells drilling. There are 212 more drilling wells under way this fall than a year ago, and 550 more than two years ago, and the increase is in areas where very high operating costs prevail.

For example let us go back to Oklahoma. The number of wells drilling the week ending November 14 compared with the same week last year shows the following: An increase of 153 in the Oklahoma City territory; a decrease of 25 in the Greater Seminole area covering South Okfuskee, Hughes, Seminole, Pottawatomie and Pontotoc Counties; decrease of two in Osage County; decrease of 16 in the central western and western territory of which Enid is the center; a decrease of 11 in the territory including Pawnee, Payne, Tulsa and Creek Counties and a decrease of 16 in the area comprising Muskogee, Wagoner, Okmulgee and north Okfuskee Counties; a decrease of 35 in the Lawton district and 35 in the Ardmore district. Here we have an increase of 153 and decreases of 133, or a net increase of 20 drilling wells. The cost of drilling the 762 wells listed in mid-November, 1928, was approximately $24,384,000. The cost of drilling the wells listed this mid-November will be approximately $36,650,000 because of the tremendous costs in the Oklahoma City area running from $125,000 upward. The average cost of drilling last fall's listed drilling wells was about $32,000 per well. The average cost of drilling the wells now listed for completion will be about $47,000 per well, and this does not take into account air and gas lift equipment, necessary for the successful operation of deep wells when the pressure has declined. Much of last year's drilling program had to do with areas from 1,500 to 4,500 feet deep. This fall nearly 20 per cent of the wells drilling are destined to go below 6,300 feet and nearly 40 per cent will be drilled between 4,300 and 4,500 feet. This leaves only 40 per cent of the wells, or 316 in number, that will stop above the 4,000-foot level, and most of these will be drilled from 2,000 to 3,500 feet. There is little shallow drilling in Oklahoma any more. The average cost of drilling a well in that State has risen from $4,667 in 1913 to $47,000 in 1929. The deep pay in Logan County necessitates an expenditure of about $110,000 for each well drilled; the general Seminole area is a $50,000 to $68,000 territory, exclusive of air gas lift. Oklahoma City will set the operator back $125,000 per well on an average. These are the areas that are being prorated because they represent the flush and semiflush fields of the state. The territory between the Oklahoma City Field and the Logan County Field and that between the Oklahoma City and the Seminole area is bound to be explored thoroughly in the years to come and it will all mean big money for material and labor, because the oil bearing formations lie from 5,000 to 6,500 feet below the surface.

In the Permian Basin, in West Texas, where drilling costs now range from $13,000 up to $40,000 for wells in the Permian limestone, they are also testing the Pennsylvanian series which calls for wells below 8,000 feet in some parts of the field, with the hope that in other parts, particularly Pecos County, the same formation may be found around 6,500 feet. Wells to the depths named will run from $100,000 to $200,000 in cost. The shallow drilling that characterized the Southwest Texas Fields for several years has given way to deeper drilling. The general Luling district is being drilled up with 2,600-foot wells as the rule at about $35,000 per well.

Expensive Wells in Lea County

In Lea County, New Mexico, the cost of a wildcat well, according to information given the American Petroleum Institute, averages $106,447, divided as follows: Derrick, $5,330; casing and cementing, $26,733; pipe, tanks and equipment, $9,975; water and fuel $4,942; hauling and construction $32,473; miscellaneous camp material and commissary, $5,924, and drilling $21,070. This cost would be much less if Lea County was not a desert, with few roads worthy of the name, making hauling and road construction costs unusually high.

Increasing Costs in California

The American Petroleum Institute has also compiled figures of the cost of drilling typical wells in California in 1928, (all drilling with the company's own tools). The following table tells the story for last year:

HIGH LIGHTS IN PRESENT SITUATION

Production of crude petroleum, plus imports, is in practical balance now with consumption plus exports.

Stabilization of price structure for crude and refined oil products permits operators and refiners to plan future business with confidence.

Conservation agreements do not affect drilling of wells.

There are more wells drilling now than at this time last year or in 1927.

Deeper drilling has increased the cost of wells considerably and drilling programs now in effect and planned mean the expenditure by the oil industry of hundreds of millions of dollars.

Expansion and improvements planned by the refining industry contemplates new equipment which will cost many more millions of dollars.

The natural gas industry has been especially active and new pipe lines being considered by that industry will cost vast sums. Extensions are being constructed by oil pipe line companies and further expansion of facilities is contemplated as the markets require more crude oil.

APPROXIMATE COST DRILLING TYPICAL WELLS IN CALIFORNIA FIELDS

	Kern River West Front (Near Bakersfield, Kern County)	Inglewood (Los Angeles County)	Buena Vista Hills (Near Taft, Kern County)	North Flank, Buena Vista Hills (Taft)	Rincon Hill (Sea Cliff) Near Ventura Ventura County	Huntington Beach, Orange County, On Ocean Front	Huntington Beach, Orange County, Bolsa Zone	Santa Fe Springs, Los Angeles County Buckbee Zone	Kettleman Hills, (West end of Kings County)
Approximate average depth	2,200	2,300	3,000	4,600	3,500	4,300	3,800	5,800	7,200
Approximate average cost:									
Rig	$ 3,400	$ 7,380	$ 7,500	$ 8,200	$ 9,000	$ 7,840	$ 7,854	$ 6,350	$ 7,150
Casing, tubing and rods, producing equipment	14,150	17,760	22,729	22,032	32,100	33,924	30,948	45,000	64,275
Drilling crew labor	4,000	4,500	5,200	4,360	9,300	9,600	6,660	16,000	21,738
Upkeep drilling equipment	4,000	4,800	5,720	4,500	10,200	11,000	7,325	17,600	29,346
Other expenses	9,240	13,171	12,945	18,237	16,160	23,773	23,138	35,974	75,228
Total	$34,790	$47,611	$54,094	$57,329	$76,760	$86,137	$75,925	$120,924	$197,737
Cost per foot	15.81	20.70	18.03	12.46	21.93	20.03	19.98	20.85	27.46

Attention is called to the cost of drilling in Santa Fe Springs to 5,800 feet given in the table. Now they are drilling to lower zones and the wells are going down to oil pays between 7,000 and 8,000 feet in depth, and the added material and labor has increased the expense proportionately. With the average cost to drill a 5,800-foot hole in Santa Fe Springs, $20.85 per foot, prevailing in the present drilling campaign in the same field, a 7,500-foot well would cost the producer about $156,000. The Kettleman Hills area calls for wells from 6,000 to 8,000 feet in depth. The first well in Kettleman Hills cost over $200,000, but a considerable part of this was spent in road construction and transportation.

Upkeep of Old Properties

The average price of crude oil in the United States is higher this year than last. The average for 1928 was only $1.16 per barrel and the average in Oklahoma, Kansas and North Central Texas was $1.38. The average in the areas named now is $1.50 per barrel and the present proration plans in California, Texas, Oklahoma and Kansas which aim to keep production and demand as near a level as possible, if maintained throughout the winter, will stabilize the price. The current prices of oil in the United States while they cannot be called high are not so low but that owners of partly depleted properties can make them pay. Prices are high enough to warrant the expenditure of money in material and supplies to keep the properties up to a proper standard of efficiency. The owner of an old oil property, which in times of low crude prices is not paying the lifting charges, spends during that time as little as he can on its maintenance. With a fair price for crude the old properties receive the atention they ought to get at all times. A fair price for crude "loosens up" the owner. He is willing to purchase material if he can do it out of profits. There are over 300,000 oil wells on these settled production leases scattered through the country. They are at the mercy of a few gusher wells. In the fall of 1927, 100 wells in the Seminole Pool, producing an average of 1,000 bbls. each, broke the crude market to such an extent that the following year there was little profit in producing excepting from the properties with flush or semiflush production. The industry with this in mind, is trying to make oil production a profitable business generally and a stabilization of the prevailing price structure will bring success to their efforts.

Refinery Outlook

Relative to the demand for refinery products, the petroleum industry occupies a position which in some respects is unique in that the demand for its principal product, gasoline, is assured. Other industries are anticipating a smaller demand in 1930; at least for the first half of the year. This is particularly true of the industries whose products are classed as luxuries.

It is certain, however, that the country's consumption of gasoline, lubricating oils and fuel oils will be greater next year than the year just closing. In regard to gasoline and lubricating oil the demand is certain because the motor vehicles which require these products are already in the hands of the consumers. Without the sale of an additional automobile, truck, bus or airplane, the demand for gasoline and lubricating oils in this country would be greater in 1930 than it was in 1929.

Motor car registrations have shown a consistent increase throughout 1929 so that at the end of this year there will be enough cars in operation to assure a larger demand for gasoline and lubricating oil in 1930 than there was in 1929.

The average owner no longer considers his car a luxury. It is necessary not only for his pleasure but he also relies on it as being essential for the transportation of himself and family.

Bus and truck transportation are increasing in importance in gasoline consumption. This is based on sound economy when compared with other forms of competitive transportation. For this reason it is certain that with new bus and truck freight lines already provided for, the gasoline demand from this class of consumers will continue to increase. Finally there is the new demand coming from the aviation trade. This demand while still relatively small when compared with the motor vehicle consumption, increased 100 per cent in 1929 and will show a similar increase in 1930.

Gasoline Consumption

Gasoline demand from refineries in the United States for first nine months of this year totaled 326,081,000 bbls. and this was 40,426,000 bbls. or 14.1 per cent greater than the same period in 1928. This increase of over 40,000,000 bbls. is approximately equal to the increase commonly predicted for all of 1929. It was thought at the beginning of the year that the demand would not increase over 10 or 11 per cent, this being a normal yearly rate of increase.

The larger number of cars sold in the first nine months of 1929 coupled with the increased consumption by many classes of owners brought a 14.5 per cent increase in the domestic demand. The export demand increased 11.6 per cent resulting in a total increase of 14.1 per cent. It is probable that the rate of increase in 1930 will not be as great as it was in 1929. Some economists believe that the abnormal increase in 1929 will be offset in 1930 so that the increase for the two years will be normal. This would mean an increase of at least 7 to 8 per cent in 1930.

Kerosene Market

The demand for kerosene has shown little change over the past few years. Fortunately, however, the production yields have decreased due to the increased yields of gasoline and the fact that some of the newer crude oil supplies are not suitable for the manufacture of this product. This situation has brought an equilibrium between supply and demand and favorable prices are maintained throughout the greater part of the year.

Fuel Oil and Gas Oil

Fuel oil and gas oil, the other main products of crude oil, have been low in price over the past three years. These low prices have built up a heavy demand and the market outlook over the past three months has been pointing to higher prices. With the crude oil situation in control the practice of throwing large quantities on the market will cease and it is generally predicted that prices will show further improvement in the early part of 1930.

The expansion of cracking facilities has also tended to restrict the quantity of fuel oil and gas oil available for sale as fuel and this should also aid the market in 1930.

Refinery Expansion

For the year just closing it is certain that a greater investment was made in new refinery equipment than any previous 12 months in the history of the petroleum industry. Programs already outlined for the coming year assure that this enlargement and improvement program will continue through 1930. Practically the same situation applies to the natural gasoline branch of the industry where it is estimated that approximately $300,000,000 is now invested.

The expansion programs of the past year and those assured for next year are due to the fact that more and more attention is being paid to all phases of the manufacturing operations in the oil industry. Refining practices of five years ago in all divisions of plant operation from the crude storage tanks to the loading racks including power plant operations and other auxiliary equipment are now obsolete and most refiners, especially the larger companies are finding it expedient to junk the old and install the new.

A visit to any of the larger refineries will generally reveal batteries of old shell stills and other equipment which are shut down preparatory to dismantling. The stills have been replaced with one or more large pipe stills with their mammoth towers, new type furnaces, efficient heat exchange systems and other improvements which have greatly reduced the operating costs per barrel of throughput.

As an illustration of the improvements to take place one company has just ordered a large number of expansion chambers which will be installed in new cracking units. The chambers alone will cost approximately $1,000,000. These cracking chambers installed at the refinery with all the other necessary equipment will represent an investment of at least $10,000,000. The demand for gasoline and the relatively low prices prevailing for fuel oil and gas oil, the raw material

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CHANGES IN 30 YEARS IN MATERIAL AND LABOR IN DRILLING WELLS

Cost of drilling typical well, Los Angeles Basin (California) in 1920		Cost of drilling "deep" well in Washington County, Pennsylvania, in 1899	
Material:		Material:	
Steel derrick, complete	$ 5,845	Rig, complete	$ 500
Rig irons	750		
Sand reel and band wheel	1,000		
Calf wheel	230		
Lumber for flooring and housing	1,000		
Rig, complete	$ 8,825	Rig, complete	$ 500
1,100 ft. 20-in. casing	8,568	1,000 ft. 7⅝-in. casing	800
4,300 ft. 13⅜-in., 61-pound casing	15,134	2,000 ft. 5⅝-in. casing	720
5,900 ft. 9-in., 45-pound casing	11,703		
5,800 ft. 6⅝-in., 28-pound casing	7,714		
500 ft. 6⅝-in., 28-pound perforated csg.	1,915		
6,300 ft. 3-in. tubing	3,597	2,400 ft. 2-in. tubing	240
6,300 ft. ¾-in. sucker rods	693	Sucker rods and pumping outfit	480
Pump and fittings	75		
Casing shoes and guide	450		
Casing heads and fittings	3,000		
3-in. line pipe	234		
Miscellaneous pipe and fittings	2,500		
Material for telephone installation	175		
Belting	300		
Oil well cement	900		
Foundation cement	200		
Crushed rock and sand	300		
Corrugated iron	300		
Landing clamps	50		
Guy wire, turnbuckles, etc.	75		
Electrical material	350		
Total material cost	$ 67,148	Total material cost	$2,740
Drilling:			
Labor, drilling	25,000	Drilling at $1 per foot	$2,400
Labor, miscellaneous	5,500		
Labor, installing telephone	75		
Drilling tool maintenance (represents repairs and replacement incident to wear and tear on drilling rig)	19,800		
Cementing well	1,000		
Fuel gas	4,000		
Water and electricity	1,000		
Shop work	500		
Hauling material	2,500		
Coring	5,000		
Oil waste, packing, etc.	500		
Steel lines	2,500		
Miscellaneous material	3,500		
Digging sump, laying of water lines and incidental hauling	1,500		
Total drilling cost	$ 72,375	Total drilling cost	$2,400
Grand total	$139,523	Grand total	$5,140

Authorities for the above comparisons of drilling material and costs: The American Petroleum Institute's "Petroleum Facts and Figures," 1929 edition, and the Oil City Derrick's "Handbook of Petroleum" for 1899-1900.

PREPARATIONS COMPLETED FOR BIG CONVENTION OF A.P.I. AT CHICAGO

Final arrangements have been completed for the program of the tenth annual meeting of the American Petroleum Institute to be held at Chicago December 2 to 5.

Various committees of the institute will begin their meetings November 30, continuing through December 2. The formal program opens December 3 with a meeting of the Board of Councillors. In the afternoon the president's address will be delivered by E. B. Reeser of the Barnsdall Corp., directors will be elected and Sir Henri W. A. Deterding, managing director of the Royal Dutch-Shell interests, will speak on "Common Sense in the Oil Industry." Group meetings will begin the morning of December 4, continuing until the meeting closes with the annual dinnuer the evening of December 5.

All sessions will be held in the Stevens Hotel. Official headquarters will be at the registration and information desk. Press headquarters will be in Room 457, while headquarters for the Division of Standardization and Division of Development and Production Engineering will be in Room 421-A. The convention program follows:

MEETINGS, BOARD OF DIRECTORS, DECEMBER 2, 3, 4.

Monday, 2:30 p.m., Private Dining Room, No. 1; Tuesday, Luncheon, 12-2 p.m., Private Dining Room, No. 1; Wednesday, Luncheon, 12-2 p.m., Private Dining Room, No. 1.

Executive Committee, December 5, Thursday, Luncheon, 12:15 p.m., Private Dining Room, No. 1.

TUESDAY, DECEMBER 3

Morning—North Ballroom

10:30 A. M. Meeting Board of Councillors.
To nominate candidates for election as members of the Board of Directors.

Afternoon—Grand Ballroom

2:30 P. M. General Session.
The President's Address.
Report of Board of Councillors, and Election of Directors.
"Common Sense in the Oil Industry," Sir Henri W. A. Deterding, Royal Dutch-Shell Companies.

WEDNESDAY, DECEMBER 4

Morning Group Meetings, 10 A. M.—South Ballroom

PRODUCTION PRACTICE:
"Casing Stress Analysis and Deep Well Casing Practice in California," Clarence J. Coberly, Kobe, Inc.

SYMPOSIUM ON STRAIGHT HOLE DRILLING PRACTICE:
John Franklin Dodge, Secretary of the National Committee on Drilling Practice, will present the results of experimental drilling and summarize the papers and discussions at various district meetings

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Mechanical Phases of Unit Control

Considerable Saving Effected in Areas Where This Principle Has Been Employed. Greater Interest in Subject

By L. G. E. Bignell
Petroleum Engineering Editor

During the past four or five years a good deal has been written and said about unit control of oil and gas pools and the general idea, which at first was not received with favor by the officials of the producing companies, is gradually being accepted as workable and desirable. Within the past 18 months a considerable amount of acreage has been tested and operated under one form or another of the unit control type.

Naturally this problem has been discussed from a great many angles, depending largely upon the past experience of the individual considering it. It is therefore possible to secure reliable data on operation of pools as viewed by the economist, land man, geologist, production superintendent and the executives, and interwoven into all of these proposed methods is the legal phase of the situation which varies in the different states in which oil is found and also as interpreted by the officials of the National Government.

The mechanical side of the problem has also had its consideration by the petroleum engineers and technicians and it would seem from these studies that the machinery for making unit operation effective, both during the drilling and producing period, is available to suit every type of pool or formation that might be encountered.

The agreement to operate a pool under unit control principles seems to be most easily accomplished where the acreage is held by the larger producing companies, for in those cases the number of individuals involved in the negotiations is limited, and these men are all more or less in accord because of their particular type of work, which is, in each major company, quite similar.

Texas Conditions Favorable

Because of this condition it seems that the principle of unit controlled pools and acreage has been applied mostly in Texas where the general conditions seem to lend themselves more readily to this method of operation, for the acreage owned by the individual companies is usually large and the type of structure underlying these areas is more fully understood and worked out by means of geophysical methods.

However, there are some conditions in Texas that have had their undesirable effect upon unit pool operation, and one of them is the fact that in the old surveys of land in that state there has occurred a great many "vacancies" or areas where the boundaries of the various blocks of land as shown on the map and as surveyed in the field did not check.

This is perhaps due to the fact that when large land grants were being made in Texas, both before and shortly after the Civil War, the method of surveying was not what would be approved at this time. As much of the land was granted to railroad companies or to others who did work of one kind or another for the State, these grants were in large blocks and the land was later used mostly for grazing cattle in large herds. Therefore, the accuracy as to boundaries was not required.

Now it is quite different when a vacancy of 200 or 300 feet between property lines means that the party now filing on this proven or suspected vacancy can secure sufficient ground upon which to operate for the purpose of drilling wells and handling oil and gas when it is brought to the surface.

METHODS PROPOSED AND RESULTS EXPECTED

Petroleum engineers who have been interested in some phases of unit controlled operations have outlined some of the results to be expected by applying uniform operating conditions to all wells within the area under consideration, as follows:

1. Produce the oil with a minimum of gas, thus securing larger ultimate oil recovery and maintaining flowing production for the longest possible time.
2. By holding back pressure on the well it is hoped to retard the encroachment of edgewater and the coning of bottom water. It is assumed, but not known, that both types of water are present in the pool under consideration.
3. To maintain sufficient back pressure on the traps or oil and gas separators to provide fuel for drilling wells and lease operations without the expense of recompressing the gas.

To accomplish these results it was proposed that the pool be operated under the following conditions:

1. Each operator shall hold that back pressure on each well which gives the lowest possible gas-oil ratio without reducing its production over 20 per cent.
2. In no case shall an operator produce any oil with a gas-oil ratio over 5,000 cubic feet per barrel, regardless of the loss in production which this second proviso may require.
3. Meters shall be placed on each well and an inspector working under the supervision of the umpire for that district, shall check the daily meter charts and oil gauges to make certain that proper gas-oil ratios are being secured.
4. A committee of engineers shall be appointed to serve as advisor to the district umpire and the proration committee. This committee shall collect necessary data and recommend changes in operating conditions on various wells and on the pool as a whole as the changing situation in the pool makes changes advisable.

An instance of this kind that has gone down in history as an outstanding example was the strip that was discovered as a vacancy between the McElroy Ranch and the University land in Crane County, Texas, which was about 440 feet wide and 4.8 miles long. When filed upon this strip became the deciding factor in drilling that whole area on both sides as rapidly as the strip was developed.

Another case of this kind seems possible just at this time in Ector County, Texas, in what is known as the Judkin area where Sections 1, 2 and 3 of Block 35, University lands, and the adjoining properties do not seem to have boundaries in common.

Anticipating that development of this area might bring about a line fight that would be costly to all involved, it has been suggested by the Landreth Production Corp. that all parties interested agree to a proposed well spacing plan that is shown in alternative in two plats, "A" and "B" printed herewith.

In Plat "A" it is assumed that the boundaries as shown on the maps that have been endorsed by the Board of Regents for the University are correct and no vacancy exists.

Plat "B" shows the same area as it would appear if a resurvey of the land proves that the lines do not properly outline the boundaries of the different blocks of land and there is a vacancy of approximately 736 acres in this area.

It is therefore suggested that in the event that Plat "A" survey is correct that the interval between wells in an east-west direction will be 880 feet and the interval between wells in a north-south direction will be 660 feet.

This would mean that wells are to be located 330 and 440 feet from east-west and north-south lines, respectively, and would result in a systematic arrangement of 6 wells to each 80-acre tract, or 12 wells to each 160-acre piece. Should any excess exist it would be absorbed in the interval between inside locations.

Plat "B" reflects a well spacing plan similar to that shown on Plat "A." It is somewhat intricate due to the irregularity of the vacancy tracts. It is identical plan of Plat "A" modified so that there would be only one row of wells down the center of the vacancy strip north of Section 1, thus making each location 440 feet or more from all property lines.

On the long strip between the University lands and the Connell Ranch the north-south intervals between wells is 880 feet instead of 660 feet as elsewhere, and this allowance is made in the expectation that the adjoining leaseholders will not drill closer than 440 feet from the lines of the vacancy strip. This procedure would materially reduce the congestion of wells along this vacancy strip and would be a step toward economical development.

This proposed spacing plan is recommended because of the depths to producing horizons and the character of the lime in this area, and a program of 1 well to 10 acres or an interval of 660 feet between wells would cause this field to be overdrilled.

Plan Followed at Winkler

The plans as outlined were followed in the north part of the Hendricks Pool in Winkler County, viz., 6 wells to each 80-acre tract, and proved to have its economic benefits in that area for all operators and resulted in a good recovery of oil as well. It is felt that it is better adapted to the Ector County area under consideration than the drilling of four wells to each 80-acre tract because of the irregular form of the blocks which would necessitate a very uneven spacing of the wells with resultant poor drainage of the oil-producing horizons.

This is one of the many interesting type of problems that confront the land man, legal and production department of the oil companies and it has been found that in most instances all parties concerned do get together in some form of mutually satisfactory agreement that ultimately accomplishes all that can be desired in the way of holding drilling costs to a minimum as well as securing a maximum yield of oil at the lowest possible production costs.

Gulf Coast Interested

Along the Gulf Coast of Texas and Louisiana the tremendous cost of geophysical exploration in the locating of salt domes and the consequent hazardous and lengthy, as well as costly, drilling programs usually experienced in salt dome development places a financial burden on Gulf Coast operators sometimes prohibitive individually.

This situation has led operators in that territory, perhaps more than elsewhere, to pool their interests, and operate their wildcat acreage jointly on an undivided interest, basis, thus sharing in the cost and at the same time eliminating any duplication of effort and expense and preventing any excessive drilling which

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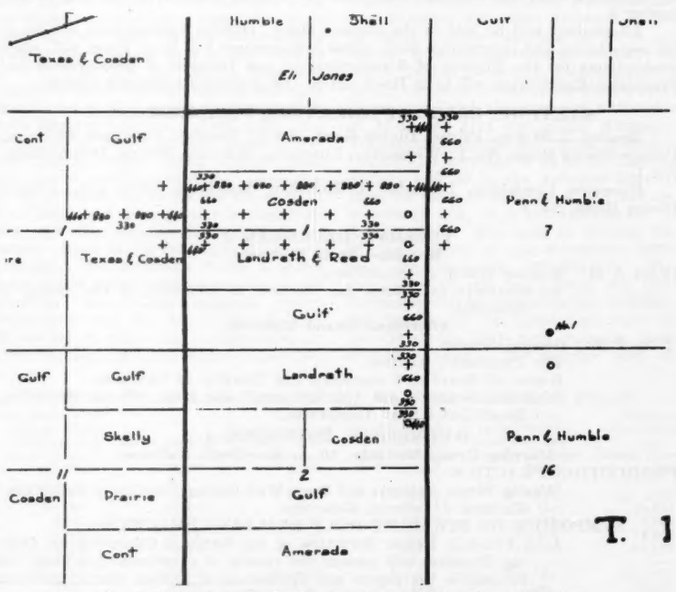

Plat "A," Landreth Production Corp.'s proposed well spacing plan.

More Mergers Under Consideration

Changes in Oil Industry Favorable for Large Scale Operation. Refining and Marketing Basis for Realignments

By C. O. Willson

The coming year will witness the completion of mergers and expansion programs exceeding in importance those of the past year, according to predictions now commonly heard in financial circles.

In an industry which in the past few months has seen the consolidation of the scattered Continental, Marland and Prudential interests, the nation-wide growth of the Shell operations and the overnight expansion of independent producing units into the refining and marketing branches, it is not difficult to give credence to reports concerned with changes in prospect for the coming year. The average oil man when confronted with the latest report assumes the attitude that "it could be true," and even the wildest rumors are seldom discounted 100 per cent.

It is recognized by oil men generally that the tendency toward large operating units is in line with developments in other industries and that changes in the oil business have brought about conditions which are particularly propitious for consolidations. In this connection one observer contends that many of the smaller mergers and expansion programs of the past year were preliminary to major consolidations which will become effective during 1930.

The proposed merger of the Prairie and Sinclair interests and the remainder of the Sinclair properties with the Standard Oil Co. of Indiana is indicative of the size of the mergers now being suggested. Although the Prairie, Sinclair and Standard of Indiana realignment has hardly reached the preliminary stage it is conceded officially that it will receive consideration and if the plan of merger already suggested cannot be worked out one or more of the companies named will be involved in some other consolidation or enlargement program.

Changed Conditions

The fact that the oil industry is becoming more and more a manufacturing, transportation and merchandizing business rather than centering its efforts in the production of crude oil is offered by one major company executive in explanation for the trend toward large integrated units. This executive points out that for many years the refining and marketing branches were considered simply as outlets for crude oil operations and profits were usually dependent on the ability of a company to maintain a large flush production of raw material.

The large excess crude oil production of the past two years, a condition which, except for brief periods, has been the rule since 1920, coupled with the tremendous investments now necessary in the refining, transporting and marketing branches of the oil industry, has changed the relative importance of these four main branches of the oil industry.

In regard to crude oil production an official of another major company engaged in all branches of the oil industry takes the position that the large reserves which are now definitely proven have eliminated the danger of a shortage in raw material for a few years at least. In line with this viewpoint his company over the past two years has pursued a policy of reducing its crude oil inventories rather than advancing prices and speeding up operations whenever its demand temporarily exceeded its supply.

In regard to the future, it is felt by many that advancement in the science of geology, coupled with improved operating methods, have removed the up and down movement in crude oil production. Some, at least, believe that the curtailment plan of operation now in effect in the fields of the Mid-Continent and California will have to be adopted as a permanent policy due to the fact that the geologist and driller will always be able to keep a reserve supply in excess of current demand. This in effect means that the crude oil branch will have to curtail its output to the point where prices can be maintained at levels in line with production costs. This obviously will tend to stabilize conditions in that branch of the industry and the "feast and famine" method of operation, characteristic of the past, will give way to a routine operation in which the producer will give more attention to developing outlets for his production rather than increasing the supply.

Manufacturing Phase

Because it does not lend itself to publicity as readily as the other branches of the oil industry, few people even within the industry realize the rapid progress being made in the art of refining petroleum products from crude petroleum. The same can be said of the manufacture of natural gasoline and other products obtained from natural gas. Fundamentally, the fact that refining has become a real manufacturing operation supplanting the teapot operation of the past, is probably more responsible for consolidated operation than any other development in the oil industry.

Investment interests realize that the refinery operation instead of being an inconsequential step between the crude oil production and consuming markets has in fact become the vital phase of an integrated operation. Cases can be cited where the refinery processing has carried the burden of a complete operation, offsetting the losses in other phases of a company's activities.

When refining consisted largely of a simple skimming operation involving an overall expenditure of 10 to 20 cents per barrel for plant operating costs it was natural that the main concern of a company centered in the producing and marketing branches. Now with the refining costs running from 40 cents to $1 per barrel the relative situation is changing.

Advancement in technical knowledge as in the case of the crude oil producer is responsible for this change. Many refiners have found that with proper equipment they can make 1 bbl. of crude oil do the work of 1½ to 2 bbls. with their old methods of operation. The new equipment not only gives the greater yields but better products are being obtained and due to its direct relationship to marketing operations the latter development is as important as the former.

To keep pace with progress in manufacturing operations several of the larger companies are investing more money at their refineries than they are in the drilling of new wells. As expressed by one refinery manager, "there are no dry holes with refinery equipment properly designed and installed," and this explains why many refinery operators are constantly improving all phases of their operation.

In this connection there is plenty of proof for the statement that the most attractive investments in the oil business over the past two years have been the companies which through research departments and capable engineering staffs have been able to keep pace with improvements in refinery operation. Important as this has been in the past it is certain to be of greater significance in the future. There are many investigations under way, some of which have reached the semicommercial stage, which overshadow in importance anything that has been developed over the past 15-year period which covers practically all the progress made in refinery processing.

The development of new products is another phase of operation which emphasizes the importance of manufacturing. Some progress has already been made and technologists agree that the day is not far distant when products other than fuels and lubricating oils will be obtained by refinery operators. In time these new products might be of greater importance, so far as profits are concerned, than the main products now obtained.

Transportation

Closely linked with refining is the transportation phase. In the past, lower transportation costs have been the most important advantage which the large integrated companies have had over the smaller independent units. The large operator who can move his crude oil by pipe line or water or a combination of the two from the fields to the refineries and then ship his plant products over short distances to consumers, has an important saving over the disintegrated operations of the independent producer, refiner and jobber which are largely dependent on tank car transportation.

This situation has been reflected in the expansion program of large refiners who have built new plants at points where the pipe line and water transportation facilities were available. It is certain that this situation will be a major factor in any larger consolidations of the coming year, the aim being to secure the maximum reduction in transportation costs.

Marketing

Finally, the trend toward wider marketing operations with national merchandizing and large export outlets as the ultimate aim is a guiding factor pointing to the consolidation of some of the sectional operations now effective.

Past experience has shown that a com-

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TWENTY LEADING REFINING ORGANIZATIONS

	Number of refineries	Daily crude oil capacity (bbls.)
Standard Oil Co. (New Jersey):		
Standard Oil Co. of New Jersey	4	231,000
Humble Oil & Refining Co.	6	137,000
Beacon Oil Co.	1	25,000
Standard Oil Co. of Louisiana	1	80,000
Total	12	473,000
Standard Oil Co. of California:		
Standard Oil Co. of California	3	225,000
Pasotex Petroleum Co.	1	10,000
Total	4	235,000
Shell Union Oil Corp.*		
Shell Co. of California	3	88,000
Shell Petroleum Corp.	5	140,000
Total	8	228,000
Standard Oil Co. of New York:		
Standard Oil Co. of New York	3	38,500
Magnolia Petroleum Co.	5	80,000
General Petroleum Corp.	4	98,000
Total	12	216,500
The Texas Corporation:		
The Texas Company of Delaware	18	179,700
The Texas Company of California	2	35,000
Total	20	214,700
Standard Oil Co. of Indiana:		
Standard Oil Co. of Indiana	3	101,500
Mexican Petroleum Corp.	2	33,000
Midwest Refining Co.	3	68,000
Utah Oil Refining Co.	1	6,000
Dixie Oil Co.	1	3,000
Total	10	211,500
Gulf Oil Corp.:		
Gulf Refining Co.	5	200,000
Tide Water Associated Oil Co.:		
Tide Water Oil Co.	1	60,000
Associated Oil Co.	2	75,000
Tidal Refining Co.	1	10,000
Tidal Western Refining Co.	1	3,000
Total	5	148,000
Sinclair Consolidated Oil Corp.:		
Sinclair Refining Co.	8	129,200
Richfield Oil Co. of California:		
Richfield Oil Co.	4	116,000
Tiona Refining Co.	1	1,000
Total	5	117,000
Total (first 10 companies)	89	2,172,900
Union Oil Co. of California:		
Union Oil Co.	6	104,400
Atlantic Refining Co.:		
Atlantic Refining Co.	4	72,000
Continental Oil Co.:		
Continental Oil Co.	8	71,000
Pure Oil Co.:		
Pure Oil Co.	6	55,500
Cities Service Co.:		
Empire Oil & Refining Co.	6	36,500
City Service Refining Co.	1	15,000
Crew-Levick Co.	1	3,000
Total	8	54,500
Sun Oil Co.:		
Sun Oil Co.	3	42,000
Mid-Continent Petroleum Corp.:		
Mid-Continent Petroleum Corp.	1	40,000
Standard Oil Co. of Ohio:		
Standard Oil Co. of Ohio	2	24,000
Latonia Refining Co.	1	5,000
Total	3	29,000
Louisiana Oil Refining Corp.:		
Louisiana Oil Refining Corp.	1	25,000
Vacuum Oil Co.:		
Vacuum Oil Co.	3	23,000
Total (second 10 companies)	43	526,400
Grand total (first 20 companies)	132	2,699,300

*Does not include 30,000-bbl. refinery of Shell Eastern Petroleum Products Co. which is shut down.

Committee on Unitization Reports

Mid-Continent Oil and Gas Association Receives the Recommendations of Experts on Conservative Plans of Operations

The committee on voluntary unitization of the Mid-Continent Oil and Gas Association submitted its report to the general board of directors of the association in Tulsa Tuesday.

The report, which follows, was accompanied by a suggested unit operating contract (committee form); a unit development contract, (trustee form); unit development contract, (adjustment form); and a suggested agreement for co-operative development and operation. The report of the land men's committee, which was published last week in The Oil and Gas Journal is also made a part of the general report to the association.

The committee is in two divisions, legal and land, and its membership is as follows: Legal division, James A. Veasey, Carter Oil Co., chairman; R. L. Gordon, Indian Territory Illuminating Oil Co.; T. J. Neuner, Barnsdall Oil Co.; J. W. Finley, Empire Oil & Refining Co.; H. K. Hudson, Phillips Petroleum Co.; Paul Mason, Prairie Oil & Gas Co. Land division: Fred S. Cook, Prairie Oil & Gas Co., chairman; R. F. Kinnan, Carter Oil Co.; G. A. Schwab, Barnsdall Oil Co.; J. E. Grattan, Empire Oil & Refining Co.; Norwood Lykes, Indian Territory Illuminating Oil Co.; and C. O. Starke, Phillips Petroleum Co.

Their report says:

Impediments to Progress

"In addition to the varied terms and conditions of leases there have been other impediments to the progress of voluntary unitization. Prominent among these has been the attitude of lessors and of some operators with a lack of understanding of what unitization is and the benefits to be derived therefrom; also the time-honored custom of the lease broker of selling acreage spreads. The broker, however, has discovered that he can sell undivided interests in his block of acreage with as much ease as he formerly sold separate tracts or leases and that, in fact, he can complete the promotion more expeditiously under the new method than under the old system. As to the lessor or royalty owner, it is believed that he will join the movement in time, because unitization will broaden his chance of success by giving him an interest in the entire area, and a greater possible recovery. But it is submitted that it is not indispensable to the success of unitization that the royalty interests be included. Successful unit development may be effected by the working interest, without affecting royalty rights, due care being exercised in the location of wells to prevent drainage or other violation of underlying lease contracts.

"In the case of the uninformed operator who opposes unitization because he believes it will interfere with his freedom of operations, it should be pointed out that he may sell or assign his undivided interest in a unitized area with the same facility that he could sell separate leaseholds; that if he is a competent operator there is no reason why he may not be chosen as the operator of unitized areas and thus be enabled to keep his organization busy; and that at all events he will prosper from the improved condition of the industry resulting from stabilization.

Measures Suggested to Facilitate Unitization

"Since much of the opposition to the unit plan arises from lack of acquaintance with the practical details thereof, this committee suggests that familiarity with the terms of unit contracts and practices will aid in extending unitization. We therefore submit a suggested model unitization agreement for use in the ordinary cases where the acreage is held in divided tracts and the desire is to unitize for the purpose of beginning development. This form contains the 'committee' method of direction and control. A somewhat similar contract makes use of a trustee and is known as the 'trustee form.' The provisions of such a contract may be changed to suit the peculiar conditions of each case.

Provision for Adjustment of Values and Amount of Acreage Within the Pool

"Where questions arise as to the relative value of tracts or leases to be contributed or as to the amount of acreage properly to be included or as to where the boundary should be, the contract may provide for subsequent adjustments and refixing of the proportional interests. This provision may consist of a simple agreement between the parties or the adjustment may be secured by bond or by a reserve set up for that purpose.

Co-operative Agreement

"In cases where it is not possible to persuade owners of acreage to unitize, much good may be accomplished by means of an agreement for co-operative development and operation. The need for such an agreement frequently arises in trend plays or extensions to known pools. Here the agreement may provide that the initial well in the extension area, designated a key well, shall be held back in production for a stated length of time, usually the length of time required to drill offsets. The consideration supporting this waiver of discovery rights usually consists of undertakings on the part of surrounding owners to contribute to the cost of the well in case it fails to produce. The contract should contain, in all cases, provisions for regulating and controlling the production in the interest of conservation.

Code of Practice to Support and Promote Unitization

"Of vital importance to the unitization movement is the supporting policy on the part of operating companies that they will not purchase spreads of acreage about new drilling projects nor agree to make dry hole contributions unless the acreage is to be unitized or a co-operative plan of development and operation agreed to.

"While this may be said to be the policy of an impressive number of oil-producing companies in the Mid-Continent Field at the present time, the whole structure is weakened by a tendency on the part of some to recognize exceptions. One exception leads to another and every exception made tends to destroy confidence that there is a serious intention to adhere to the policy.

"For these reasons we recommend that no exceptions be made other than the one recognized in the subjoined suggested rules of practice.

Rules of Practice

"1. The oil pool rather than the individual tract or lease is the natural competitive unit in the oil-producing business and all future development should be on this basis.

"2. The buying of divided tracts or spreads of acreage as a means of promoting or financing new development projects is inconsistent with and in opposition to unit development.

"3. Agreements to contribute dry hole money to procure tests of new prospective areas constitute an antiquated and deleterious practice unless confined to cases where a co-operative agreement has been made to insure orderly development and production when oil is found. The only permissible exception to this rule is in the case where all the conditions are known and only small wells or pools can be expected to result from the drilling. Small wells are defined as those not capable of producing more than 100 bbls. per well per day.

"4. The same economic considerations which prohibit the purchase of spreads of acreage and the contribution of dry hole money require also that no new drilling project should be undertaken in checkerboarded areas until every effort has been made to unitize or to effect a co-operative agreement even though there is no occasion or request for purchase of spreads or contribution of dry hole money.

"5. Complete frankness, mutual confidence and trust are essential to success in the unitization movement. It is therefore recommended that the policy be adopted of revealing to each prospective member of a unitized pool the geological information in possession of each participant therein, including the results of core drilling.

"6. The practice of 'top leasing' is regarded as unethical in the oil-producing business. Negotiations by strangers to the title to procure leases to take effect in the future are in derogation of the rights of lessees under valid existing leases in that they force drilling and interfere with efforts to unitize or form co-operative agreements.

"7. In order to promote the success of the unitization movement by allaying suspicion or refuting rumors as to alleged infractions of the policy against purchase of spreads and contributions of dry hole money, it is suggested that each operator make it an invariable rule to file with a central agency complete reports of exceptions made to Rules 2 and 3, together with the reasons therefor, and showing the approval thereof by a chief executive of the company; and that such reports be kept on file and open to inspection by all bona fide operators. The practice of also filing with said agency copies of completed unitization contracts and co-operative agreements for distribution would aid in the educational phase of the movement. The logical agency for this purpose in the Mid-Continent Field is the Mid-Continent Oil and Gas Association and its various divisional offices.

Conclusion

In conclusion, your committee recommends the endorsement and adoption of this report as a statement of principles and policy and the appointment of a standing unitization committee charged with the duty of securing the general adoption of the unitization movement and of issuing a handbook of information on the subject for general circulation."

The recommendations of the committee in its concluding paragraph were unanimously approved and adopted by the board of directors.

UNIT DEVELOPMENT COMMENDED IN THE ROCKY MOUNTAIN REGION

By J. W. Steele
Supervisor Rocky Mountain Branch, United States Geological Survey.*

For the past five years the engineers connected with the petroleum industry have talked long and loud concerning the important part which natural gas performs in the production of oil. The essential facts were concisely stated in a report by the Technical Subcommittee of the American Petroleum Institute Gas Conservation Committee in the following words:

"The data show conclusively that the conservative and efficient utilization of gas are of paramount importance in the conservation and economical production of oil. Gas dissolved in oil makes the oil more fluid, and more capable of movement through the pore spaces of the reservoir rock to the well; the energy stored in the same gas is the chief force behind that movement. The more gas the easier the oil moves and the greater the force available to move it. To dissipate gas from an oil sand is to lessen the propulsive force and increase the need for it. The energy and solution values of oil field gas are of tremendous importance. The proper utilization of gas results in greater and more orderly oil recovery at lower cost. The data show that the way to use gas to the best advantage is to use it in its original state, and that the conditions in a sand, once destroyed, can never be completely restored."

As a logical conclusion to the acceptance of the above ideas the report further stated:

"The data show finally that many, probably most, of the best methods for gas utilization can be practiced advantageously only when they can be applied systematically to a whole field; that competitive drilling in individual fields almost inevitably leads to gas waste and lessened ultimate oil production; and that either complete co-operation or unit operation is the ideal operating condition for the conservation of both gas and oil."

Many Different Plans

It was only natural and to be expected that the engineers would advance many different plans, some practical and some totally impractical, but all looking to the ultimate recovery of the largest amount of the oil in the sand through the conservation of gas pressure, and the resultant retarding of the line of water encroachment.

At first the oil executives listened patiently to the engineers' views but found many reasons for not being able to make practical applications of the plans except in so far as it was found possible to apply the improved recovery methods to individual leases. Then as the tendency toward overproduction began to disturb the entire oil and allied industries by lowering the price of oil, depreciating the bonds and forcing expensive storage facilities, more serious attention was paid to ways and means of correcting an unhealthy condition.

Undoubtedly the most important cause of production out of all proportion to the demand for crude oil, or so-called overproduction is the law governing the right of the owner of land to recover oil from the land. The law is, that the owner of the land has the right to recover from his land all the oil that can be produced regardless of the original source of the oil. In other words, ownership can only be established if and when the oil is reduced to possession. The result has been that when an oil field was once proven an immediate scramble was started among all the owners in the field to recover as soon as possible all the oil available. Inasmuch as the law of ownership of oil is well established and there is little possibility of it being modified to conform to other mineral laws, it is apparent that the results of such a condition could be remedied only by the joint action of every one concerned.

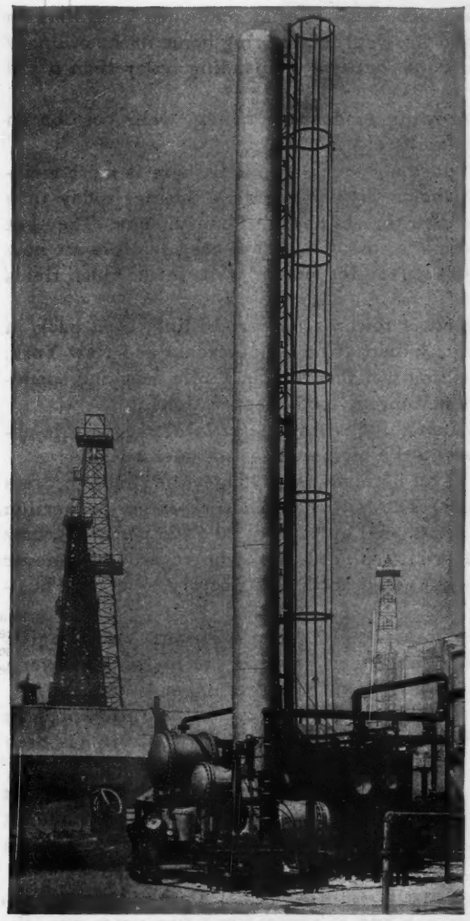
Groping in Dark

When the oil industry finally appealed to the Government for assistance and advice in solving its problem of overproduction, the Federal Oil Board declared it had no control over the general production of oil, that if there was to be any

(Continued on Page 146)

*Before Rocky Mountain Oil & Gas Association. Casper, Wyo., November 20-21.

From a $$$ and ¢¢¢ Standpoint



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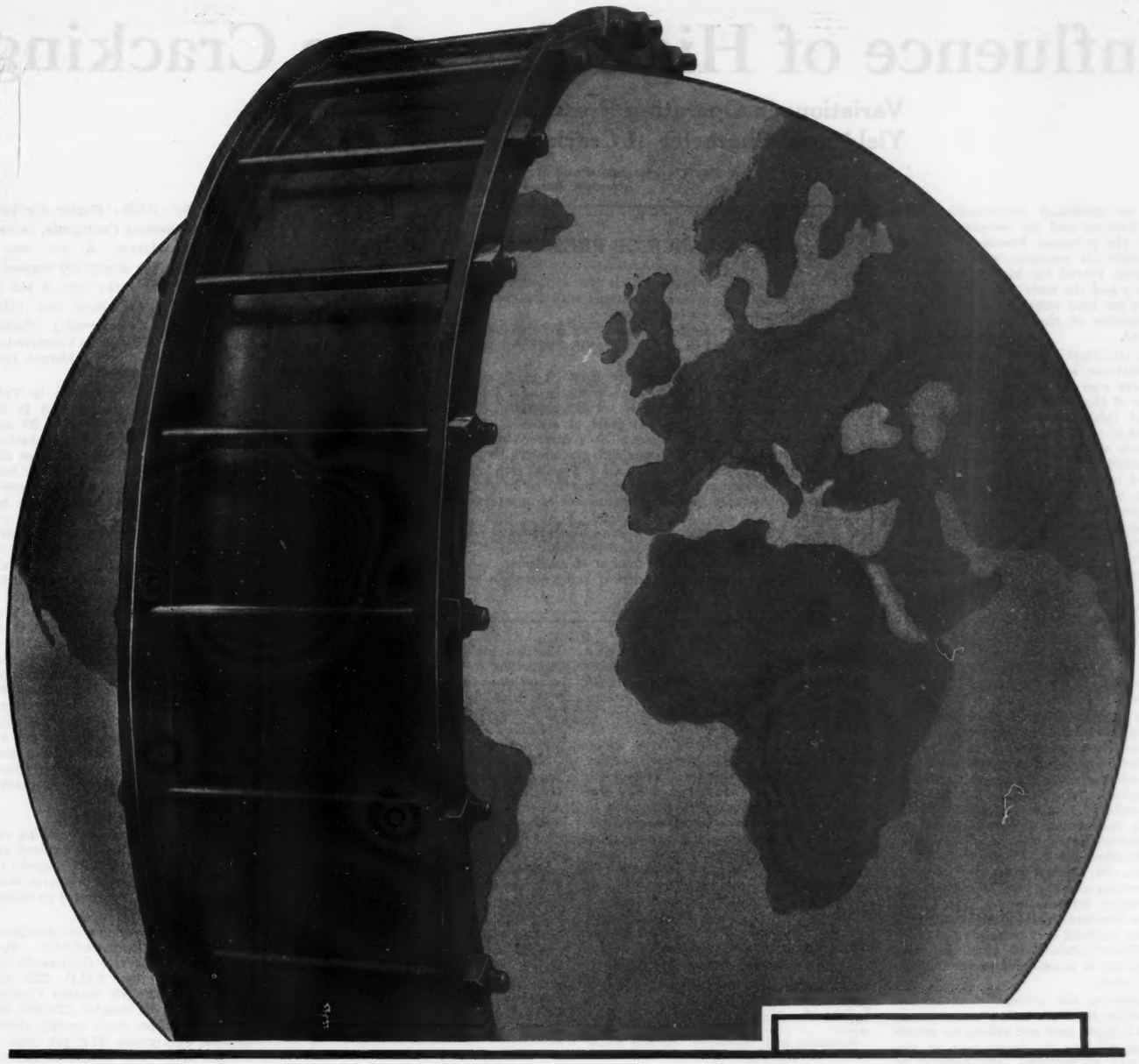

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Influence of High Pressure Cracking

Variations in Operating Pressures Reflected in Both the Yields and Character of Cracked Gasoline and Kerosene

By A. N. Sachanen and M. D. Tilicheyev
Groznuii, Russia*

In the preceding investigations[1] the main features and the results of cracking of the principal Russian crude oils and crude oil products were discussed. The part played by high pressures in cracking and the more complete cracking has not yet been properly explained. The investigation of these problems is here reported.

The investigation of cracking of naphtha fractions indicates that these fractions are also decomposed under the influence of the cracking temperatures, the rate of this decomposition being lower than that of heavier crude oil fractions or crude oil products. Nevertheless approximately 15 per cent of naphtha are cracked in one hour at 425 degrees Centigrade or in 10 minutes at 450 degrees Centigrade, forming about 5 per cent of light gasoline and gas, calculated on the original product. It is evident that the gasoline fractions by themselves are also decomposed under the influence of cracking, although the velocity of their decomposition must be still lower than for naphtha fractions. It follows therefore that the gasoline formed during the process of cracking is also further decomposed on remaining under the influence of cracking, as for example in reaction chambers.

This decomposition of already formed gasoline is of course very important in high pressure cracking systems as compared with low pressure cracking systems where the cracked gasoline leaves the system as it is formed. As a matter of fact however the results of this decomposition should not be considered important from the manufacturing point of view. In reaction chambers of the Cross and Vickers systems, the cracked product is held in the reaction chamber for 30 minutes at an average temperature of about 450 degrees Centigrade, the product delivered into the cracking coil containing only an insignificant amount of gasoline, while the amount of gasoline discharged equals 30 per cent.

Considering the average concentration of gasoline in the reaction chambers as being 15-20 per cent and taking for granted that gasoline is decomposed in the same way as naphtha, the amount of gasoline decomposed to gases in the reaction chambers during these 30 minutes would not exceed 2-3 per cent on the original product. The balance of the gasoline (4-6 per cent on the original product) decomposing under the conditions prevailing in the reaction chamber, will produce a gasoline composed of lighter fractions and therefore would not cause any decrease in the gasoline yield. As a matter of fact these figures, on gasoline decomposition, will be still lower due to the fact that the speed of decomposition of gasolines and particularly that of cracked gasoline is considerably lower than that of straightrun naphtha.[2] Therefore the high pressure in cracking as well as the holding back of the gasoline formed under the conditions of cracking (in the reaction chamber) (for about 30 minutes) merely causes a decrease in the yield of cracked gasoline, due to decomposition, of probably 1-2 per cent, forming therefore 28-29 per cent cracked gasoline instead of 30 per cent, if we take this as a final practical yield of gasoline from a single cracking operation with gas oil or any similar product.

*Translation. Part of material to appear in book by authors entitled "Chemistry and Technology of Cracking."

[1]The Oil and Gas Journal, 1927, June 23, p. 144; J. Inst. Petr. Techn., 14, 761-767 (1928); Sachanen and Tilicheyev, "The Liquid Phase Cracking," p. 871, Moscow (1928 Russian edition).

[2]J. Inst. Petr. Techn., 14, p. 763 (1928).

SIGNIFICANCE OF PRESSURE IN CRACKING

In the accompanying article the authors explain in detail their observation based on cracking operations with Russian oils at varying pressures. Their conclusions are as follows:

1. An increase in pressure does not exercise any noticeable influence on the final stages of cracking (with a yield of approximately 10 per cent of gasoline).
2. An increase in pressure from 10 to 40 atmospheres decreases the yield of cracked gasoline by approximately 3 per cent in the case of moderate cracking (25 to 30 per cent of cracked gasoline).
3. The decrease in the yield of cracked gasoline on increasing the pressure is due to two causes: (a) a further decomposition of cracked gasoline with a partial conversion into gas, and (b) a polymerization of the unsaturated hydrocarbons which are converted into higher boiling compounds.
4. An increase in pressure from 10 to 40 atmospheres in the case of moderate cracking decreases the amount of unsaturated hydrocarbons nearly twice.
5. The amount of naphthene hydrocarbons in cracked gasoline increases under these conditions by 3 to 4 per cent.
6. An increase in the amount of naphthene hydrocarbons at high pressure is more noticeable in cracked kerosenes than in cracked gasolines.

However, the detention of the cracked gasoline formed under cracking conditions might have another detrimental action besides decomposition. This consists in the process of condensation of unsaturates into high boiling point products which may be possible and which cause a decrease in the yield of cracked gasoline which is a product with a boiling range of a known character. The condensation of unsaturated hydrocarbon in cracked gasolines and the decrease of unsaturated compounds in the latter at high pressures has been proved by the authors in many cases.[3] Because of these two possibilities, i.e., the decreased yield of cracked gasoline at high pressure, and the decomposition and the condensation, the authors conducted a number of experiments which are described here.

Influence of Pressure

The influence of the pressure is not so pronounced in the yield of cracked gasoline in the first stages of cracking, as has been shown.[4] For more complete information, the experiment with Groznuii mixed base fuel oil is given in Table 1. This mixed base fuel has a specific gravity of 0.906 (15 degrees Centigrade) and contained 4.6 per cent of a fraction below 300 degrees Centigrade.

The figures in the sixth column give the amount of distillate (in per cent) obtained through cracking, i.e., the amount of lighter products of decomposition obtained under cracking conditions. The results shown in Table 1 show plainly that pressure has no influence on the yield of light products of cracking in the first cracking stages, i.e., on cracked gasoline and cracked kerosene.

Cracking Fuel Oil

A more extensive cracking was investigated on Surakhanui fuel oil low in coke formation and which therefore offered the possibility of conducting the process without local overheating. The characteristics of the Surakhanui fuel oil were as follows: Specific gravity (at 15 degrees Centigrade), 0.893; Engler distillation: I.B.P. 290 degrees Centigrade, below 300 degrees Centigrade, 3 per cent (by weight); residue above 300 degrees Centigrade, 96 per cent; loss, 1 per cent; E_{50} viscosity, 4.0; pour test (Holde), +14 degrees Centigrade; flashpoint (Marcusson), 177 degrees Centigrade. The results of cracking Surakhanui fuel oil are given in Table 2.

On analyzing the figures in Table 2 the following should be kept in mind: The duration of cracking at 20 and 40 atmospheres was four minutes shorter and at 80 atmospheres eight minutes shorter than at 10 atmospheres. This lowered the yields in cracked products accordingly at 20, 40 and particularly at 80 atmospheres. Bearing this in mind we arrive at the conclusion that the yield in cracked gasoline under extensive cracking of Surakhanui fuel oil at 10 atmospheres is approximately 4 per cent higher than the yield at the more elevated pressures of 20-80 atmospheres. The yield in cracked kerosene at all pressures investigated is practically the same. It is interesting to note that the yield in cracked gasoline practically does not change on raising the pressure from 20 to 80 atmospheres. This is due to the fact that only 10 per cent of distillates are obtained on cracking at 20 atmospheres and at 425 degrees Centigrade, the greater part of the products of decomposition remaining in the cracking zone under cracking conditions.

Baku Gas Oil

A still more extensive cracking experiment was made with Baku heavy gas oil at a temperature of 450 degrees Centigrade, and at various pressures whereby over 30 per cent of cracked gasoline was obtained.

The Baku heavy gas oil distillate had the following characteristics: Specific gravity at 15 degrees Centigrade, 0.890; Engler distillation, I.B.P. 225 degrees Centigrade, 225-270 degrees Centigrade, 0.8 per cent (by weight; 270-300 degrees Centigrade, 6 per cent; residue above 300 degrees Centigrade, 92.8 per cent; loss, 0.4 per cent. The results of the experiment are given in Table 3.

The duration of the cracking was 3-4 minutes shorter at 10 atmospheres than at elevated pressures, but this fact is of a minor importance in the case of a very extensive cracking as the velocity of cracking decreases gradually and is very small in the case of a high yield in

(Continued on Page 111)

[3]Sachanen and Tilicheyev, "Liquid Phase Cracking," pp. 127 and 215 (1928).

[4]Ibidem, p. 44.

TABLE 1
The mixed base fuel oil was cracked for 33 minutes at 425 degrees Centigrade

Atmospheres pressure—	Yield in % by weight on original product: Gases and loss	Gasoline below 200°C.	Kerosene within 200-300°C.	Residues above 300°C.	Amount of cracked distillate % by weight	Specific gravity at 15° C. of cracked gasoline
10	2.7	9.8	15.2	71.5	11.1	0.918
20	4.9	9.7	14.1	70.4	3.5	0.919
30	6.1	9.8	14.3	65.8	...	0.922
40	7.6	9.9	15.3	67.0	1.0	0.918

TABLE 2—CRACKING SURAKHANUI FUEL OIL AT VARIOUS PRESSURES

No. of experiment—	Cracking conditions: Temperature °C.	Pressure atmospheres	Duration minutes	Yield in cracked products % by weight: Gases and loss	Cracked gasoline below 200°C.	Cracked kerosene 200-300°C.	Cracked residue above 300°C.	Distillation losses	Amount of cracked distillate % by weight
1	425	10	98	10.0	26.0	21.0	42.0	1.1	27.3
2	425	20	94	6.5	21.6	22.1	48.7	1.1	10.5
3	425	40	94	8.5	19.5	20.4	49.5	2.0	0.0
4	425	80	90	6.2	20.4	18.2	52.8	2.4	0.0

TABLE 3—CRACKING OF HEAVY BAKU GAS OIL DISTILLATE AT VARIOUS PRESSURES

No. of experiment—	Cracking conditions: Temperature °C.	Pressure atmospheres	Duration minutes	Yield in cracked products % by weight: Gases and loss	Fraction below 200°C.	Fraction 200-300°C.	Residue above 300°C.	Distillation losses	Amount of cracked distillate % by weight
5	450	10	48	13.3	33.4	29.1	21.9	2.2	56.4
6	450	20	51	10.0	31.1	25.5	30.3	3.1	35.9
7	450	40	52	13.2	31.4	23.1	30.1	2.3	10.1
8	450	100	59	27.5	32.5	21.0	16.4	2.8	0.0

TABLE 4—CRACKING OF TREATED GROZNUII PARAFFIN WAX AT VARIOUS PRESSURES

No. of experiment—	Cracking conditions: Temperature °C.	Pressure atmospheres	Duration minutes	Yield in cracked products % by weight: Gases and loss	Fraction below 200°C.	Fraction 200-300°C.	Residue above 300°C.	Distillation losses	Amount of cracked distillate % by weight
9	450	10	64	9.9	41.9	31.8	11.7	4.7	77.7
10	450	20	64	11.5	42.8	19.7	21.3	4.7	48.5
11	450	30	65	14.6	42.7	22.7	17.6	2.3	37.3
12	450	30	65	12.9	46.9	17.4	20.5	2.4	38.9
13	450	40	63	13.8	38.4	22.9	23.2	1.7	29.7
14	450	100	40	7.2	33.2	36.6	21.3	1.7	0.0
15	450	100	81	26.7	40.3	18.9	13.3	0.8	0.0

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THE OIL MAN'S CALENDAR

November 25—Memphis, Tenn., Tennessee Oil Men's Association, Hotel Peabody.

November 30-December 2—Chicago, meeting American Petroleum Institute, general, technical and sub-committees.

December 2-5—Chicago, tenth annual meeting American Petroleum Institute.

December 2-3—Washington, convention National Council of State Legislatures.

December 4-7—Washington, convention American Mining Congress.

December 5-6 — Indianapolis, meeting Indiana Petroleum Association.

December 11-13—Omaha, Neb., convention Nebraska Independent Oil Men's Association.

December 12-13 — Washington, ninth annual meeting Highway Research Board.

December 16-17 — Washington, American Pharmaceutical Manufacturer's Association.

January 4-11—New York National Automobile Show, Grand Central Palace.

January 11-18—Atlantic City, convention American Roadbuilders Association.

January 21-24—Detroit, Mich., annual meeting Society of Automotive engineers.

January 25-February 1 — Chicago, National Auto Show, Coliseum.

February 19-21 — Columbus, Ohio, Ohio Petroleum Marketers Association, Deshler - Warwick Hotel.

March 19-21—Detroit, convention Michigan Oil Men's Association, Statler Hotel.

March 20-22—Roosevelt Hotel, New Orleans, La., American Association of Petroleum Geologists.

Moody-Seagraves Corp. Has Option on Holdings of Magnolia Gas Co.

DALLAS, Tex., Nov. 26.—Moody Seagraves Corp. has an option on the entire holdings of the Magnolia Gas Co. and Latex Gas Co., the latter operating in Fort Worth. Magnolia Gas Co. has assigned all the contracts and franchises held by it to these two companies in order to expedite the sale to Moody-Seagraves. So far only an option is in effect until the last of December this year.

Fred M. Lege, Jr., has resigned as president of the Magnolia Gas Co. and has been succeeded by T. J. Fitch, manager of the Magnolia Pipe Line Co., who will later resign when the deal is consummated. One million dollars is reported to have been the option price.

E. V. Baker, of New York, who is conducting the negotiations, has been in San Antonio in conference with Mr. Seagraves.

NEW YORK-VACUUM MERGER

NEW YORK, Nov. 26.—Formal announcement of the terms of the pending consolidation of Standard Oil Co. of New York and the Vacuum Oil Co. will be made within the next several days, it is reported in financial circles here. Standard Oil Co. of New York reported assets of $695,385,776 and Vacuum Oil Co. $186,864,052.

COLOMBIA OIL LAW FAILS

The Congress of Colombia closed November 16 without the passage of the new petroleum bill. Foreign oil companies are left with the emergency law of 1927, the parts to which they objected having recently been sustained by a decision of the Supreme Court, and with Decree 150 of January, 1928, which still remains suspended pending a decision by the Council of State in the suits filed by the American companies. Because of the change in government the passage of a general petroleum law before 1931 seems improbable.

High Spots in Field News

EAST CENTRAL TEXAS

Unit development plan in Van Zandt district ratified.

SOUTHWEST TEXAS

Darst Creek curtailment still doubtful. Showing in Balcones Fault.

GULF COAST

Shallow sand found on Starks Dome. Showing in Terrebonne Parish new dome.

NORTH LOUISIANA-ARKANSAS

Carterville area now getting play. Dixie district fading. Richland crater still giving trouble.

CALIFORNIA

New wells increase California output. Some Santa Fe Springs operators said not to be co-operating 100 per cent.

NORTH TEXAS AND PANHANDLE

Semiwildcats in Baylor and Cooke Counties interesting.
Gray County increases output 4,000 bbls.

ROCKY MOUNTAIN AREA

Frannie Dome well increases output. Southeastern New Mexico wells put on production. Kane County, Utah, test spudded.

MICHIGAN

Deep test in Ottawa County at 4,776 feet, encountered gas estimated from 100,000 to 250,000 feet coming from the Cincinnati series. Opens promise of oil and gas from lower formations in Muskegon Field.

KANSAS

Voshell Pool, McPherson County, may be major area. Wells from Wilcox and chat promise large yield.

New shut-down agreement is effective in Ellis County, Phillips, Skelly and The Texas Company participating.

WEST TEXAS

New pay in Shipley Pool, Ward County.
Menard County has good showing of sweet oil.
Pecos County tests promising.
Howard-Glasscock Counties proration extended and prices readjusted.

OKLAHOMA

I.T.I.O. company has 20,000-bbl. well in Oklahoma City.

Mid-Kansas Oil & Gas Co.'s No. 1 Mollman blew in making 100 bbls. first hour and 95 bbls. the second hour, extending the Oklahoma City Pool one-half mile west and practically proving every location in Section 24-11-3w.

Late News from the Field

EAST CENTRAL TEXAS

FORT WORTH, Tex., Nov. 26.—Pure Oil Co.'s No. 1 Thompson, south offset to discovery well in Van Zandt County, cored sand at 2,562 feet, then drilled into red shale at 2,586 feet. It is running a little higher than the discovery and looks like the Woodbine.

KANSAS

A new shutdown agreement has been made, effective Tuesday November 26, in Ellis County, Kansas, which provides the Phillips Petroleum Co. shut in its No. 2 Shutts, in Section 5-12-17w, Ellis County, which swabbed 350 bbls. the day before, for an indefinite period. The other companies included were the Skelly Oil Co. and The Texas Company. This wildcat area which is almost exclusively owned by the Phillips Petroleum Co. also has other producing wells but none as large as the above well. Skelly Oil Co. and The Texas Company have agreed not to start any offset tests to the No. 2 Shutts well, until after the first of the year. This shutdown agreement has been made between these companies in the interests of conservation and to prevent an overproduction of crude oil.

Mid-Kansas Oil & Gas Co.'s No. 1 Voshell, NE cor. NW NE, Section 9-21-3w, McPherson County, has the Wilcox sand at 3,190-94 feet, where it is showing 2 bailers of oil an hour. The crew is underreaming the 6-inch casing from 2,948 feet, to the top of the sand.

MICHIGAN

MUSKEGON, Mich., Nov. 26.—Daily production of the Muskegon Field remained within 20 bbls. of last week's average while the estimated flow of the Mount Pleasant Field dropped 800 bbls. a day for the week ending Monday, November 25 at 7 a.m. The drop reduced the aggregate daily production of three Michigan fields from 16,720 to 15,900 bbls. or less than it has been for several months. Mount Pleasant produced 8,200 bbls. of Dundee and 100 bbls. of Traverse crude daily. Muskegon made 7,000 bbls. of Dundee and 400 bbls. of Traverse while Saginaw continued at 200 bbls. of Traverse.

Prospects for new production of oil or gas in lower formations in the Muskegon Field were heightened by the announce-

(Continued on Page 151)

ROCKY MOUNTAIN OPERATORS MEET TO DISCUSS INDUSTRY'S PROBLEMS

By F. B. Taylor

CASPER, Wyo., Nov. 23.—The annual convention of the three major petroleum organizations of the Rocky Mountain region was held in Casper, Wyo., November 20 and 21. The Rocky Mountain Oil & Gas Association, the American Petroleum Institute, Rocky Mountain Division of Development and Production Engineering and the National Safety Council Petroleum Section, Rocky Mountain district, participated.

The Rocky Mountain Oil & Gas Association convention was opened by former Governor B. B. Brooks, president of the association. It was at once apparent that the paramount topic would be an effort to obtain a modification of the Federal land policy and President Hoover's order regarding the operations on government lands in the Rocky Mountain region.

Robert D. Hawley, general counsel for the Continental Oil Co., had prepared a very able paper on the status of government land holdings from the earliest explorations and the various methods of obtaining titles. Mr. Hawley said in part: "Nothing has occurred with respect to the administration of public lands, at least in recent years, which has caused such a turmoil in the Rocky Mountain states, as the president's announcement. Momentarily the inhabitants of this section were stunned and then they broke forth into tremendous activity. Charges of all sorts filled the air. It was alleged that the president had arbitrarily attempted the repeal of an act of congress without any authority. It was also said that the president was wrecking the petroleum industry in the public land states because other states refused to stop the overproduction of oil within their borders.

"That the president's policy was made more for the moral effect it would have upon other agencies involved, in an effort to curb overproduction from government lands, is borne out by an examination of the facts. There was no overproduction of oil from public lands. Figures available indicate there was less than 3 per cent of the country's production coming from the lands operated under the leasing act."

Judge A. C. Campbell opened the discussion of government and state regulation of leases.

Effect of Colorado Springs Meeting

In his opening address, former Governor Brooks referred to the meeting held at Colorado Springs saying the oil operators of the Rocky Mountain region were handicapped at that meeting and were unable to do anything towards settling the matter of the presidential policy in regard to oil lands, but that this meeting brought the oil men to the realization that they must rely upon themselves for any accomplishment though it did not accomplish anything else.

At the luncheon talks George Jarvis, manager of the Wyalta Oil Co. was advanced on the program to fill the place apportioned to R. M. Andrus of the Standard Oil Co. of Indiana and Mr. Jarvis gave an excellent paper on the relation of accident prevention to compensation and medical costs.

R. S. Ellison spoke on "Results Obtained in Safety Through Proper Leader-

(Continued on Page 110)

A.P.I. WEEKLY REFINERY STATISTICS

The weekly report made to the American Petroleum Institute on refinery statistics—crude runs to stills, gasoline stocks and gas and fuel oil stocks—for the week ending November 23 follows:

	(1)	(2)	(3)	(4)
East Coast	100.0	3,495,000	4,6 5,000	8,760,000
Appalachian	86.0	573,100	876,000	782,000
Indiana, Illinois, Kentucky	98.3	2,148,500	4,252,000	3,915,000
Oklahoma, Kansas, Missouri	89.0	2,007,500	2,634,000	3,943,000
Texas	91.1	3,906,800	5,627,000	14,645,000
Louisiana and Arkansas	97.1	1,331,800	1,719,000	5,228,000
Rocky Mountain	93.4	426,700	1,803,000	992,000
California	99.3	4,654,100	14,289,000	109,171,000
Total United States	95.4	18,543,500	35,805,000	147,436,000
Texas Gulf Coast	100.0	3,008,700	4,724,000	11,255,000
Louisiana Gulf Coast	100.0	929,600	1,506,000	4,292,000

(1) Per cent refinery capacity represented. (2) Crude runs to stills. (3) Gasoline stocks. (4) Gas and fuel oil stocks.

Why reciprocating HOT OIL PUMPS

In the testing of pumps for capacity, various types of meters, such as the Pitot tube, the Venturi, or a Weir, may be used.

In discussing the accuracy of meters no less an authority than Mr. C. A. Hague has said:

"It is generally conceded by disinterested people that in a properly designed and constructed displacement pump, the plunger displacement will give closer results, in a matter where perfection is impossible, than any other method."

And they do say, "The opinion of an expert is always desirable."

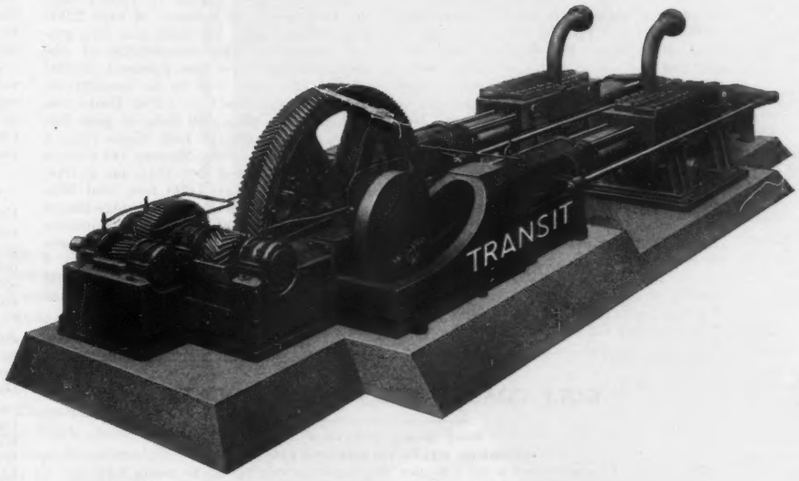

Fig. 1936
TRANSIT Horizontal Duplex End Packed Plunger Hot Oil Power Pump, with double reduction gearing for internal combustion engine or motor drive.

All TRANSIT HOT OIL PUMPS are Reciprocating Pumps

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St. Louis, Mo.

Shallow Sand Found on Starks Dome

Production Found at 840 Feet While Pay in Other Wells Was Below 4,000 Feet. Showing Found in Terrebonne Parish

By Neil Williams
Staff Correspondent, Gulf Coast Fields

HOUSTON, Tex., Nov. 25.—Shell Petroleum Corp. has not as yet made a commercial producer of its No. 1 Blakely-Winston, wildcat on the Danbury salt dome prospect in south central Brazoria County. After running tubing, the well swabbed 50 bbls. of fluid, of which 86 per cent was oil, in 20 hours but when it would not flow naturally it was shut down to await orders. When tested a week ago, the well swabbed 75 bbls. net oil, and then tubing was run in that the well might flow or be put on the pump.

The Danbury test is looked upon as the discovery well of another coastal field. Although it has not been completed successfully and the production is small, it has indicated the existence of oil in that area which will be a guide in further development of this new dome prospect, discovered geophyisically by the Shell Petroleum Corp. earlier this year. It is likely this first test finally will be completed as a small pumper and the heavy derrick and rig skidded over for another location.

Production in the Danbury test is from a shallow sand at 1,572-77 feet. The finding of this sand interrupted the drilling of a deep test, which originally was planned for the No. 1 Blakely-Winston. The dome was checked as being deep seated, which with the finding of a shallow sand, offers numerous possibilities for development both in shallow sands and in flanking deep sands. Oil in the Danbury test checks 22.1 gravity.

Shallow Sand Discovery

A shallow sand discovery also was made on the Starks Dome in Calcasieu Parish where the Gulf Refining Co. completed its No. 16 Lutcher-Moore flowing 50 bbls. of pipe line oil daily from sand at a total depth of around 840 feet. This is the first shallow production at Starks Dome, previous wells having been completed below 4,000 feet flanking the dome. The No. 16 Lutcher-Moore was drilled by the Gulf on top the dome following recent discoveries by the Texas Gulf Sulphur Co. of oil showings in sulphur wells drilled by that company. Being developed jointly by the Gulf and the Standard Oil Co. of Louisiana, Starks Dome has given promise of prolific production but so far the development has not been entirely profitable. Considerable drilling on top and around the dome has been done but wells have been few.

These two new shallow sand discoveries are in sharp contrast to the general trend in development on the Gulf Coast the past year which has leaned to deep sand drilling. It generally has been conceded that the only hope for new production on the coast rested in deep sands flanking the domes or at low levels on top of very deeply seated domes. Deep sand development, chiefly on the south side of Humble and on the east and south sides of Barbers Hill, has furnished the main drilling of interest on the coast the past year and has been responsible for the boosting of the daily average output to figures considerably higher than at any time in the last several years.

Development of the Barbers Hill and Humble deep horizons has shown no signs of abatement. At Humble, Humble Oil & Refining Co. added another good well in its No. 1 Trahon, which offsets The Texas Company's No. 1 Dunman, completed several weeks ago flowing better than 8,100 bbls. daily and which now is flowing more thn 3,400 bbls. daily. No. 1 Trahon flowed 1,895 bbls. pipe line oil on a 19-hour gauge with 414 feet of screen set at 5,050 feet, the oil being of the usual high gravity, 41.5 degrees. Within the past ten days five new deep tests have been rigged up in the vicinity of The Texas Company's No. 1 Dunman, which is approximately 1,600 feet to the west and south of the main part of the deep sand field.

Barbers Hill

The three completions in the deep sands at Barbers Hill during the week were not especially favorable. Superior Oil Corp.'s No. 2 Illfrey, which set 116 feet of screen at 5,072 feet, was flowing between 500 and 600 bbls. of fluid, of which around 65 per cent was base sediment and water. The Texas Company's Nos. 1 and 2 Wilburn also made small wells with salt water.

Of considerable interest at Barbers Hill late in the week was Mills Bennett Production Co.'s No. 2 Barber on the north side of the hill, which did the unusual of drilling through caprock into formation again. The bit went through a little more than 400 feet of anhydrite cap and instead of going into salt found the cap a secondary cap, a ledge overhanging the usual flanking formations of the dome. Saturday the test was drilling in gumbo at 3,065 feet. The secondary cap began at approximately 2,200 feet. Drilling through this cap into formation reopens a sizeable area on the north side for development as previous tests in that area have been abandoned on going into this cap, whereas under it possibly lie the flanking oil sands which tests drilled off from the supposedly dome cap failed to find because of being too far away from the real dome.

Humphreys Corp.'s No. 1 Scott, which is located to the southeast of Bennett's No. 2 Barber had a similar experience during the week. It drilled through approximately 200 feet of overhanging secondary cap into formation but being closer to the dome quickly went through formations back into the main anhydrite and into the salt, slightly below 2,000 feet.

Such secondary cap rocks are extremely rare. This cap at Barbers Hill is believed by geologists to have been caused by the caprock while in process of formation being pushed out from the dome into a loose or fractured stratum flanking the dome, there crystallizing and remaining in a sort of overhanging eave shaped ledge over the lower flanking formations.

Refugio Field

The Refugio Field continues to bring in a steady string of producers, both oil and gas, with the result that this field is a strong competitor against Humble for being the third largest oil field on the Gulf Coast. Daily average production of Refugio climbed to 16,103 bbls. the past week, an increase of over 2,000 bbls. Three good oil wells and two gassers comprised the completions of the week although over the weekend several other wells were due to be brought in. Pearson Properties' No. 2 Fox Heirs was brought in flowing 550 bbls. of pipe line oil on a three-eighths inch choke from a sand at 3,700-08 feet; Morgan Oil Corp.'s No. 3 City flowed 600 bbls. on a five-sixteenths choke at 3,699 feet, and Mission Drilling Co.'s No. 1 Eskridge-Heard was rated at 500 bbls. on a quarter choke at 3,669 feet. The two gassers were Independent Oil & Gas Co.'s No. 1 Anna Reilly, which also is spraying some oil at 3,694 feet, and Houston Oil Co.'s No. 2 F. Rooke at 3,682 feet.

Other completions of the week were Humble Oil & Refining Co.'s No. 1-C Bankers Mortgage, DeWalt, flowing 850 bbls., 3,673 feet; Humble Oil & Refining Co. and Valley Oil Corp.'s No. 5 Gotosky, Raccoon Bend, 500 bbls., 3,318 feet; the same operators' No. 7-A Deutrich, Raccoon Bend, 35 bbls. hourly, 3,325 feet; Yount Lee Oil Co.'s No. 98 Gladys City, Spindletop, estimated 1,600 bbls. oil, 3,259 feet; the same company's No. 118 McFaddin, Spindletop, estimated 300 bbls., 4,933 feet; Tillery Oil Co.'s No. 3-B State, Orange, 630 bbls., 3,509 feet; Brownie-Babbett Oil Co.'s No. 8 McLean, Orange, pumping 125 bbls. oil, 3,612 feet; Republic Production Co.'s No. 128 Dolbear, Hull, pumping 350 bbls., 2,428 feet; Yount Lee Oil Co.'s No. 19 Mitchell, Liberty, pumping 120 bbls. fluid, 20 per cent b. s. and water, 3,559 feet; Navarro Oil Co. and Humble Oil & Refining Co.'s No. 5 Dooley, 2,000 bbls. fluid, 200 bbls. oil, 4,592 feet; Rex Petroleum Co.'s No. 8 Hunter, Edgerly, 50 bbls. net oil, 3,738 feet; Rio Bravo Oil Co.'s No. 78 Cotton, 40 bbls., 533 feet; Paraffine Oil Co.'s No. 80 Paraffine, Batson, pumping 10 bbls., 469 feet; B. O. Poole's No. 2 Paraffine, Batson, pumping 7 bbls., 917 feet.

Among the half dozen abandonments was The Texas Company's No. 4 Calcasieu Lake on the Calcasieu Lake Dome in the south part of Calcasieu Lake, Cameron Parish. This test was quit in rock at 5,484 feet.

Showing on Dome Prospect

Finding of an oil sand in The Texas Company's No. 1 State, Bay Junope, Terrebonne Parish, Louisiana, is of some importance. This test is the first on that dome prospect, which is the last of seven taken over by The Texas Company from the Louisiana Land & Exploration Co., on all of which now except Bay Junope either production has been found or the dome proved by salt. The sand, being at 4,778 feet, and which will be tested, is at the deepest level reached on any of the seven domes in the parish. On another of these domes, Bay St. Elaine, salt was struck by No. 3 State which now is at a total depth of 2,417 feet. Two large gas wells have been completed on this dome but this, the third test drilled, is the first to find the dome. The gas was found at shallower sands.

Gulf Coast Production

Daily average production during the past week follows:

TEXAS	
Allen	9
Barbers Hill	21,159
Batson	1,325
Big Creek	4,439
Blue Ridge	2,228
Brenham	150
Boling	1,348
Clay Creek	1,965
Damon Mound	490
DeWalt	12,800
Fannette	2,023
Goose Creek	5,479
Hankamer	600
High Island	2,813
Hull	10,308
Humble	16,917
Jasper County	35
Lost Lake	365
Markham	366
Nash	515
North Dayton	490
Orange	3,440
Orchard	74
Pierce Junction	11,551
Port Neches	1,189
Raccoon Bend	8,800
Refugio	16,103
Sheeks	255
Saratoga	966
Sour Lake	2,550
So. Liberty-So. Dayton	5,708
Spindletop	20,738
West Columbia	6,259
Total Texas Coast	163,448
Week ending November 16	165,978
Decrease	2,530

(Continued on Page 129)

GULF COAST FIELDS AND WILDCATS

Week Ended November 23

BARBERs HILL—CHAMBERS COUNTY

Mills Bennett Production Co.'s No. 1 Collier (southeast).. Rigging up to pump 5.387 ft.
Mills Bennett Production Co.'s No. 2 Collier (southwest).. Drlg. surface formation 560 ft.
Mills Bennett Production Co.'s No. 2 Barber, north side.. Drlg. gumbo 3,065 ft.
Mills Bennett Production Co.'s No. 4 Smith, east side ... Drlg. shale and lime 4,697 ft.
Mills Bennett Production Co.'s No. 3 Hammon-Armstrong (southeast) ..... Drlg. broken lime 4,861 ft.
Mills Bennett Production Co.'s No. 1 Wilburn (southeast). Drlg. shale and lime 3,544 ft.
Gulf Prod. Co.'s No. 1 Wilburn ..... Drlg. hard sand 4,661 ft.
Humphreys Corp.'s No. 8-A Kirby, north flank ..... Drlg. sand and lime 5,436 ft.
Humphreys Corp.'s No. 2-C Kirby ..... Drlg. oil sand 5,356 ft.
Humphreys Corp.'s No. 6-B Kirby (workover) ..... Bailed salt water 4,120 ft; S. D.
Humphreys Corp.'s No. 1 Higgins ..... Swabbed some oil in cap rock 841 ft.; to pump.
Humphreys Corp.'s No. 1 Scott ..... Drlg. salt below 2,000 ft.
Humphreys Corp.'s No. 1 McLean, east side ..... Drlg. hard sand 1,496 ft.
Republic Production Co.'s No. 3 Kirby (southeast)..... Drlg. gumbo and boulders 2,380 ft.
Rexal Oil Co.'s No. 3 McLean, east flank ..... Rigging up to pump 5,170 ft.
Rexal Petroleum Co.'s No. 1 Smith (east) ..... Drlg. oil sand 2,124 ft.
Sinclair Oil & Gas Co.'s No. 2 Wilburn, southeast ..... Derrick
Superior Oil Corp.'s No. 2 Illfrey (east) ..... Comp. flowing 500 bbls. fluid, 65 per cent b.s. and salt water 5,193 ft.
Sun Oil Co.'s No. 2 McKinney (southeast) ..... Set screen 5,439 ft.
Sun Oil Co.'s No. 1 Wilburn (southeast) ..... Drlg. lime 5,070 ft.
Sun Oil Co.'s No. 2 Wilburn, southeast ..... Drlg. shale and lime 3,602 ft.
Sun Oil Co.'s No. 3 Wilburn, southeast ..... Drlg. shale 1,401 ft.
The Texas Company's No. 1 Wilburn (southeast) ..... Comp. flowing 150 bbls. oil, 18 per cent b. s. and water 5,177 ft.
The Texas Company's No. 2 Wilburn, southeast ..... Comp. flowing 600 bbls fluid, 7 per cent b s. and water 5,112 ft.
The Texas Company's No. 1 Lawrence ..... Drlg. oil sand 5,240 ft.
Yount Lee Oil Co.'s No. 9 Chambers, south ..... Drilled plug to test oil sand 4,841 ft.
Yount Lee Oil Co.'s No. 4 Woodward, southeast ..... Cmtd. casing to test oil sand 5,250 ft.
Yount Lee Oil Co. No. 5 Woodward, southeast ..... Drlg. shale and lime 3,621 ft.
Yount Lee Oil Co.'s No. 1 Phillips ..... Drlg. shale and lime 3,519 ft.

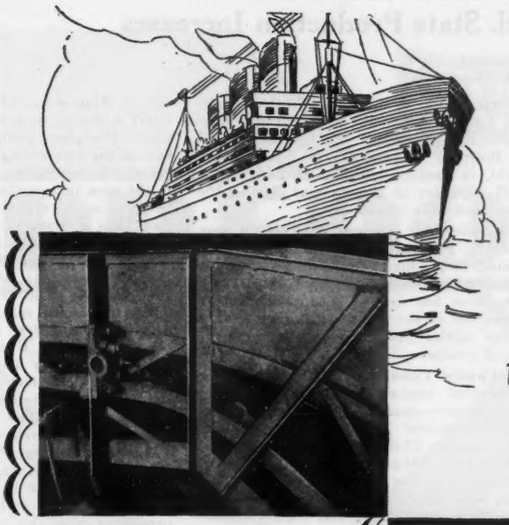
BOLING—FORT BEND AND WHARTON

Houston Gulf Gas Co.'s No. 1 Fields (northwest)..... Rig

RACCOON BEND—AUSTIN COUNTY

Humble & Valley's No. 5 Austin College ..... Derrick.
Humble & Valley's No. 3 Beal ..... Drlg. shale 2,352 ft.
Humble & Valley's No. 3 Buchanan ..... Location.
Humble & Valley's No. 6-A Walton ..... Drilled plug 3,229 ft.
Humble & Valley's No. 7-A Walton ..... Derrick.
Humble & Valley's No. 7-A Deutrich ..... Comp. flowing 35 bbls. oil hourly on half inch choke 3,325 ft.
Humble & Valley's No. 8-A Walton ..... Derrick.
Humble Oil & Refg. Co.'s No. 8-B Deutrich ..... Drlg sand rock 256 ft.
Humble & Valley's No. 9-A Deutrich ..... Rig

(Continued on Page 126)



Again ARC-WELDING *proves its* ADAPTABILITY *to practically every kind* of metal-joining job

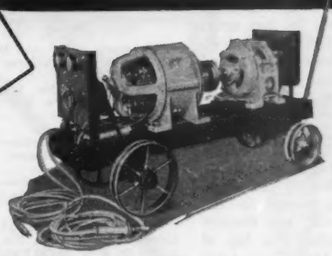
On this page is shown one of four portable apron conveyors, built for loading and unloading steamship baggage. Made of light-gauge structural steel, they were *completely fabricated* by Wilson Arc-Welding Machines and Wire.

The Conveyors Construction Corporation of New York chose arc welding after thorough investigation of other methods of fabrication—one of which resulted in warpage of the light-gauge metal, and another in weak and rocky frames.

In contrast, the *arc-welded* conveyors—made of *lighter-gauge metal*—are perfectly rigid in both horizontal and vertical planes after a year in service—handling trunks up to 400 pounds at the rate of 12 per minute.

Arc-welding is lowering production costs in practically every industry where metals are joined—producing *stronger welds at less cost.* Can you *afford* to overlook the advantages of arc-welding? You are invited to consult Wilson engineers without cost or obligation.

Whatever YOUR industry ~whatever YOUR metal-joining problem ~investigate ARC-WELDING



The Wilson Model S Welding Machine shown above is the Type 200 Amperes, one-operator, electric-motor-driven outfit.

WILSON WELDER & METALS CO. INC., 18 WILSON BUILDING, HOBOKEN, N. J.

WILSON

WELDING MACHINES AND WELDING WIRE

Voshell Pool May Be Major Area

Wells Producing From Wilcox Sand and Chat, Both of Which Pays Promise Large Yield. State Production Increases

By W. A. Spinney
Staff Correspondent, Kansas Fields

Oil production in Kansas was increased last week when the estimated daily average gauges show the State to be making 111,000 bbls. which is a gain of about 2,000 bbls. over the previous week. The majority of the gain was in Sedgwick County, which is under proration and made 22,860 bbls. from 153 wells. The Valley Center Pool shows a daily average of 16,500 bbls. from 107 wells. The Greenwich townsite made 4,627 bbls. The Robbins Pool south of town made 568 bbls.; other wells in scattered areas made 1,163 bbls.

New work is dropping off in the oil fields. Seventeen new locations were reported last week. Butler County with five is in the lead. Greenwood County had 3, Rice County 2, and the others were scattered.

Since the Derby Oil Co. opened its No. 1 Voshell, in Section 9-21-3w, McPherson County, the first Wilcox sand well in the area, it averaged as follows: November 16, 1,390 bbls.; November 17, 1,278 bbls.; November 18, 1,224 bbls.; November 19, 1,255 bbls.; November 20, 1,266 bbls.; November 21, 1,234 bbls.; November 22, 1,307 bbls.; and November 23, 1,167 bbls. The eight other wells in the county produced a daily average of 8,156 bbls. last week, ending November 22. All of them are being prorated.

Robinson & Hinkle's No. 1 Powell, C SE SE, Section 11-32-10w, Barber County, is reporting its fifth showing of gas at approximately 4,000 feet. It was drilling deeper. About 7,000,000 feet of gas was encountered at 3,000 feet.

Voshell Pool Is Important

The Voshell Pool in southern McPherson County is giving every indication of developing into a major sized pool, in the opinion of a number of operators. Production has been curtailed by prorating the wells now producing, and restricting the drilling activities surrounding these producers. Two large wells have been completed in the Wilcox sand horizon, and the chat formation now gives evidence of yielding large production. Mid-Kansas Oil & Gas Co.'s No. 1 Voshell, NE cor., NW NE, Section 9-21-3w, a quarter mile west of the discovery well, and the most westerly test in that area, had the top of the chat at 2,950 feet, where the 6-inch casing was being landed before drilling deeper. This formation is 34 feet higher than it was in the Washabaugh test, which was the discovery well in this area. Empire Oil & Refining Co.'s No. 1 Voshell, NE cor. SE NE, Section 9-21-3w, has been flowing 270 bbls. a day from 3,305-08 feet. A very thin Mississippi lime section was found in the Washabaugh, Derby Oil Co. and Empire Oil & Refining Co.'s wells. The log of the Mid-Kansas Oil & Gas Co.'s tests indicates the structure may be higher to the west. Some believe the Mid-Kansas Oil & Gas Co.'s test is running too high and that it may be a gas well in the deep sand.

Sedgwick County

T. C. Johnson's No. 1 Peachy, SE SW SW, Section 2-27-1w, Sedgwick County, a location west of the new Plains Oil Co.'s well in the same section was drilling at 3,250 feet, November 22, and was expected to reach the pay horizon in a few days. Shell Petroleum Corp.'s No. 1 Southwestern College, the east offset to the Plains Oil Co.'s well, in Section 2-27-1w, was spudding. Same company made a location in the NE cor. NW NW, Section 12-27-1w, the south offset to the Plains Oil Co.'s well, known as the No. 1 Catholic Orphans Home.

Western Activity

Since the Continental Oil Co. found oil in commercial quantities in Ness County, a new leasing campaign has been in progress. Several major oil companies have recently taken blocks of acreage in that county in a northeast and southwest trend from the new producer.

Phillips Petroleum Co.'s wildcat in Hodgeman County, will be drilled to a depth of 5,000 feet. This test is directly south of the Continental Oil Co. wildcat producer in Ness County. It is No. 1 Hausman, NW cor. NE, Section 30-22-22w, Hodgeman County, and was drilling at 4,300 feet, on November 23, after landing 4,100 feet of 6-inch casing. The original contract depth of the test was 4,300 feet, but since the Continental company found its production in a deeper horizon this test will be drilled to 5,000 feet.

Phillips Petroleum Co.'s No. 2 Shutts, SW cor. NE Section 5-12-17w, Ellis County, was drilled deeper and was swabbing around 600 bbls. from a total depth of 3,638 feet. This well is on a 6,000-acre block northeast of Hays in Ellis County. It had the top of the pay at 3,630 feet. It also extends the pool a quarter of a mile southwest. Skelly Oil Co. has the south offset and is rigging up in the NW cor. SE Section 5-12-17w.

Phillips Petroleum Co. has made a location in the south part of the Seeley Pool in Greenwood County. The well will be in SW cor. SE SW Section 22-23-11. It is east of the Simmons & Rhodes well, which indicates the producing trend is swinging to the southeast. Simmons & Rhodes' No. 3 Patterson, SE SW SW Section 22-23-11, swabbed 290 bbls. the first nine hours after a shot. On south the Dixie Oil Co. and Amerada Petroleum Corp.'s No. 3 Ellis, NE NW NW Section 27-23-11, had Bartlesville sand at 1,922-58 feet, and was estimated to be a 100-bbl. well.

Dry Holes in Lyons County

Two dry holes were completed in Lyons County last week. Bird, Hanley & Sheedy's No. 1 Williams, Section 18-21-10, Lyon County, has been abandoned at 2,360 feet. The other was the Empire Oil & Refining Co. and others' No. 1 Bradfield, in Section 1-21-11. It had a hole full of water in the lime at 2,085-2,103 feet, and was abandoned.

In the Lost Springs Pool in Marion County, Phillips Petroleum Co. has completed 16 producing wells which are now pumping approximately 200 bbls. daily. The area has been a disappointment to operators as the wells, while they have a large initial production, soon settle to small pumpers.

Cowley County Test Shut Down

Several semiwildcat tests in Cowley County were shut down last week. Shawver and others' No. 1 Oldham, NW cor. SE Section 23-32-3, was shut down at 2,375 feet. Wassen and others' No. 1 Watts, NE cor. NW Section 15-33-3, was shut down at 725 feet. Foster & Deal's No. 1 Wright, SE cor. NW Section 27-33-3, was also shut down at 3,690 feet. In the State Pool north of Winfield, Independent Oil & Gas Co. and McKnab-Bess Oil Co.'s No. 3 in Section 19-32-4, was drilling at 2,430 feet November 23. These are the only drilling wells in this pool. Tom Fine and others' No. 1 Brown, SE cor. Section 8-32-4, a half mile west of the production in the State Pool, is rigging up. It is the only test in that direction and will be interesting to operators holding leases west of the main pool.

State Line Pool Production

The daily average production for the wells in the State Line Pool near Caldwell was 1,637 bbls. The gauges by companies and leases were as follows:

Company and farm—	Bbls.
Amerada, Clark	528
Gypsy, Gibson	3
Gypsy, Enderud	1,033
Gypsy, Williams	73
Total	1,637

May Drill to 7,000 Feet

Watchorn Oil & Gas Co. may drill its No. 1 Morrison, in Section 20-31-21w, Clark County, to a total depth of 7,000 feet. The above company is carrying on one of the interesting explorations in the state. It is drilling its fifth test well in the area surrounding Ashland, in Clark County, southwestern Kansas. The company has a block of 60,000 acres under lease in the area, and is drilling its present test No. 1 Morrison, in Section 20-31-21w, in the northeastern part of the county. The test was drilling at 5,350 feet, with rotary tools. It is the deepest drilling test in the state at the present time. Unless production is found at a lesser depth this test will be drilled to 7,000 feet which will make it the deepest any well has ever been drilled in the state. The owners now have 7,000 feet of 6-inch casing on the lease. The longest string of 9-inch casing ever landed in Kansas has been cemented at 5,340 feet. A gas horizon is expected at 5,400 feet. The company has a gas well producing from this 5,400-foot horizon in Section 21-31-21w. Watchorn Oil & Gas Co. has lost three holes in the vicinity, one at 3,900 feet, one at 4,300 feet, and another at 5,700 feet. The company has spent close to $500,000 in oil and gas exploration in Clark County. The deep tests have added valuable information to geological data of Kansas.

Harper Test Abandoned

In Harper County, Slick, Pryor & Lockhart's No. 1 Thompson, NW cor. Section 19-32-6w, has been abandoned at 5,100 feet. It had a small show of oil at 4,970 feet, and found a hole full of water at 5,100 feet. Same company's No. 1 Miler, SE cor. Section 13-34-8w, Harper County, has also been abandoned at 5,400 feet.

A new Wilcox sand well has been found in northern Elk County, near Severy. The test is the Clark Oil Co.'s No. 1 Sloan, SW cor. Section 9-29-9. Oil was found at 2,640 feet, and some estimate it will make 100 to 150 bbls. Owners expect to make an immediate production test. The discovery which is 6 miles from the nearest production on the south, is important as it may lead other operators to drill in the old shallow areas in Elk and Chautauqua Counties, which are possible Wilcox sand areas.

Two wildcat tests in Chase County were spudding the early part of the week. Max Steinbuchel's No. 1 Fee, in Section 31-19-8, near Cottonwood Falls, Chase County, was spudding. This test is on a 12,000 block owned in fee. It will be a Wilcox sand test, which is expected to be found around 2,900 feet. A magnetometer survey was used in making the location which is on the east flank of the Granite Ridge. Same company's other wildcat test, No. 1 Stevenson, in Section 4-20-6, on a 7,000-acre block, and will also be a Wilcox sand test.

Butler County

Patton and Empire Oil & Refining Co.'s rig is up for No. 1 Marshall "A", SE cor. NE SW Section 11-27-5. Aladdin Petroleum Co.'s No. 1 Klingler, SW cor. NE Section 24-27-3, has been completed for 100 bbls. in sand 2,975-3,025 feet. E. W. Marland, Inc.'s No. 1 Jones, SW cor. NE SW Section 19-27-4, is dry and abandoned at 3,064 feet. Richman & Reigle's No. 2 Detrick, NE cor. SW Section 8-27-6, has been completed for 15 bbls. in sand 2,768-72 feet.

Coffey County

Young and others' No. 1 Levering, SE cor. NE Section 11-23-14, is dry and abandoned at 1,625 feet. Shaffer & Howell's No. 1 Levering, CSL SE Section

(Continued on Page 109)

WILDCAT OPERATIONS IN KANSAS

(Descriptions are East unless otherwise marked)

BARBER COUNTY

Company, farm and location—	Remarks:
Allison & Fitzwilliams' No. 1 Kimberg, NW SE Sec 2-30-12w	Abandoned.
Skelly Oil Co.'s No. 1 Temple Ranch, Sec. 13-34-15w	Shut down 4,410 ft.
Robertson et al's No. 1 Powell, SE cor. SE Sec. 11-32-10w	Shut down 3,260 ft.

BARTON COUNTY

Prairie's No. 1 Davidson, NW SE Sec. 4-16-11w	Location.
Allison & Fitzwilliams' No. 1 Brodie, NE cor. Sec. 19-16-12w	Drlg. 2,160 ft.
Slick et al's No. 1 Sweeney, SW NE Sec. 23-17-11w	Drlg. 1,285 ft.
Everett & Wiley's No. 1 Ward, NW cor. SW Sec. 12-20-13w	Shut down 3,948 ft.

BUTLER COUNTY

Lario O. & G. Co.'s No. 1 Hill, SW SE Sec. 1-27-4	Drlg. 1,000 ft.
Lario O. & G. Co.'s No. 1 Miller, NE SE NE Sec. 36-26-3	Drlg. 1,630 ft.
Martin et al's No. 1 Flanigan, C SW SE SW Sec. 29-27-3	Drlg. 400 ft.
Sinclair Oil & Gas' No. 1 Johnson, NE cor. Sec. 16-26-3	Drlg. 3,217 ft.
Stroub & Dutton's No. 1 Kirby, SE SW Sec. 12-28-3	Drlg. 1,170 ft.
Valley Osage's No. 1 Sirs, SE cor. Sec. 34-23-3	Shut down 2,600 ft.

CHASE COUNTY

E. W. Marland, Inc.'s No. 1 Altemus, SE NE Sec. 33-18-6	Drlg. 900 ft.

CLAY COUNTY

Chrisler et al's No. 1 Tivier, SW cor. Sec. 19-8-3	Rig.
Derby Oil Co.'s No. 1 Meimueller, C NW SW Sec. 9-10-3e	Drlg. 2,835 ft.
Skow Bros.' No. 1 Strud, SW SE Sec. 16-9-4	Shut down 2,510 ft.

COWLEY COUNTY

Prairie's No. 1 Leighty No. 1 Ball, SW SE Sec. 4-30-5	Drlg. 860 ft.
A. M. Landon's No. 1 Wheeler, C SW NW SE Sec. 24-30-4	Drlg. 1,975 ft.
Milton & Mead's No. 1 Tatum, SE cor. SW Sec. 11-31-6	Shut down 1,325 ft.
Roth & Farrout's No. 1 Thompson, NE SE Sec. 31-31-8	Drlg. 1,200 ft.
Shawver et al's No. 1 Oldham, NW SE Sec. 23-32-3	Shut down 2,440 ft.

DICKINSON COUNTY

Cress' No. 1 Sanden, NE cor. Sec. 12-15-2	Rig on ground.
Prairie's No. 1 Lachard, C NW SW NE Sec. 12-16-2	Rig.
Hiatt & Durham's No. 1 Wendt, NW cor. Sec. 17-16-2	Spudding.
Kruger et al's No. 1 Diche, C NW NE NE Sec. 17-13-4	Drlg. 2,035 ft.

DOUGLAS COUNTY

Jenkins & Scott's No. 1 Haden, SE NW Sec. 10-12-17	Drlg. 550 ft.

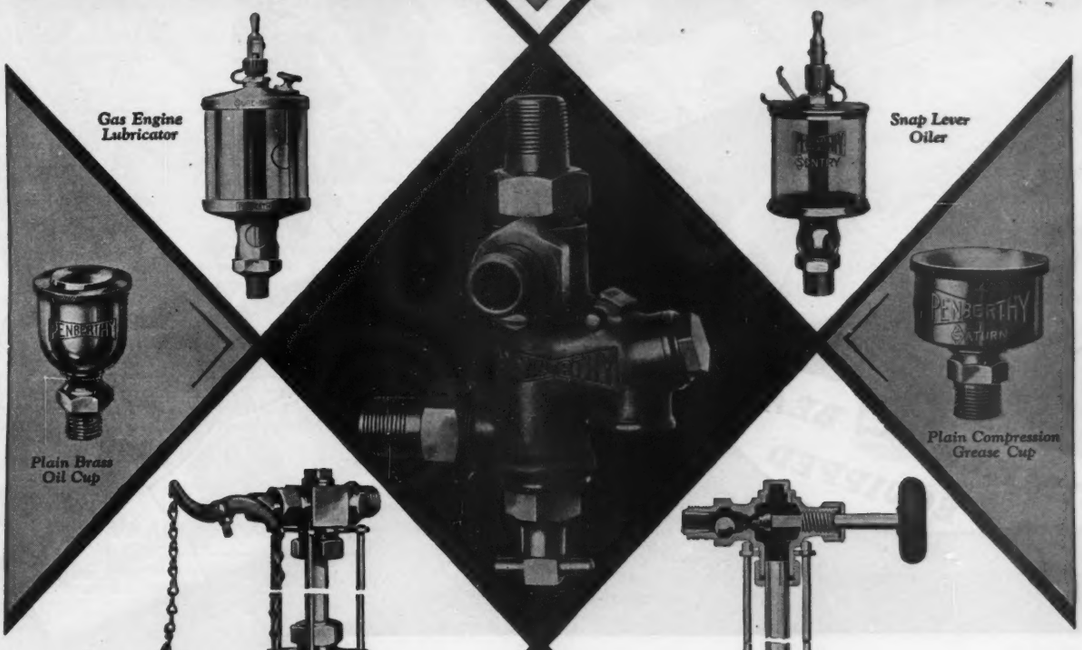
EDWARDS COUNTY

Skelly's No. 1 Johnson, NE SW Sec. 21-26-17w	Spudding.
Barnsdall Oil's No. 1 McCarty, NW NE Sec. 31-25-17w	Rig.

(Continued on Page 122)

PENBERTHY PRODUCTS

PREDOMINATE



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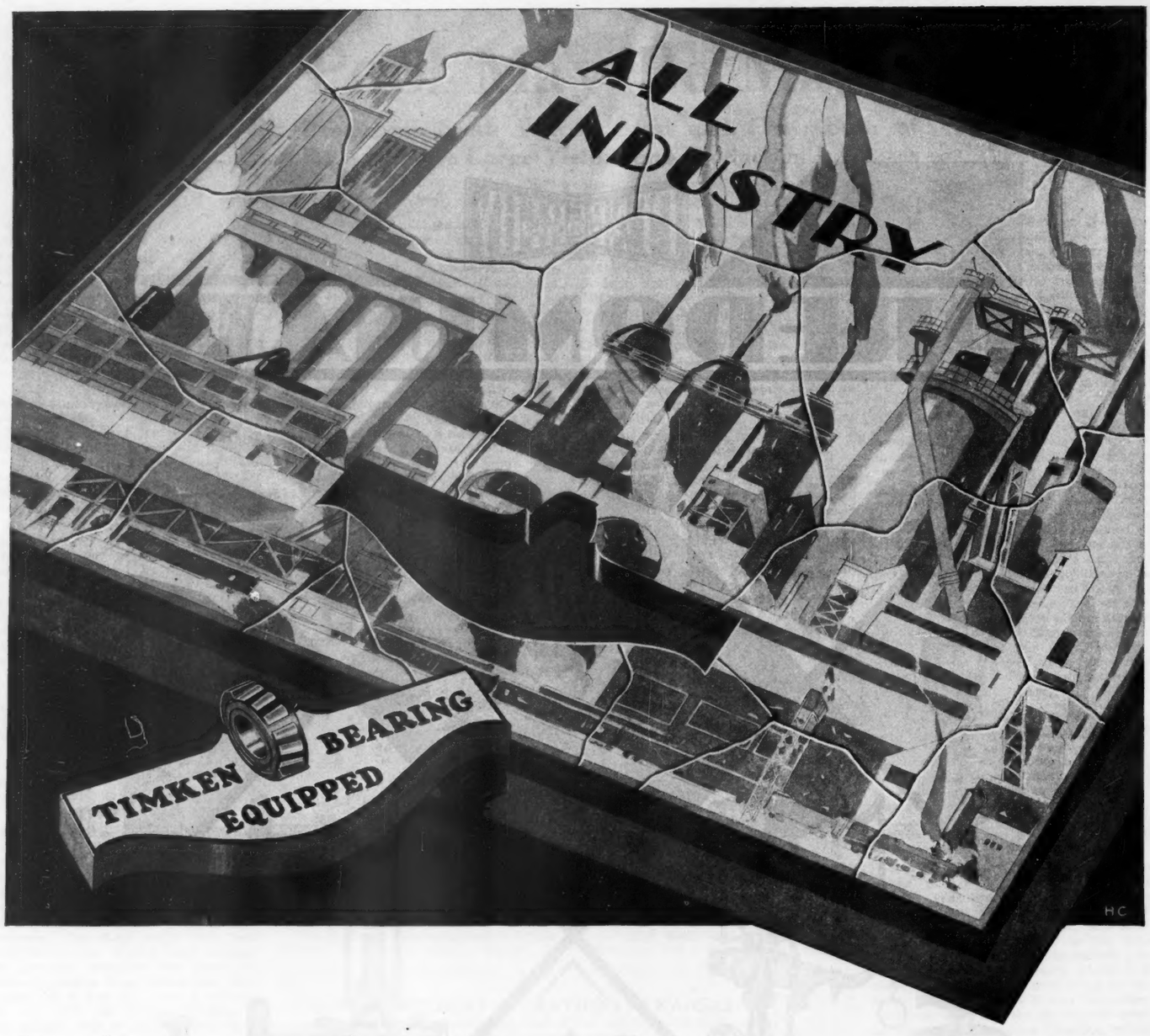

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TIMKEN *Tapered Roller* **BEARINGS**

Big Play Now in Carterville District

Dixie District Has Rather Faded Out of Picture. Richland Parish Crater Still Giving Trouble. Reworking at Smackover

By D. H. Bancroft
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., Nov. 25. — Two inches of snow is a sufficient rarity in Louisiana to divert attention from the two or three "hot" wells in the Shreveport division. It is the most lasting snow since a bilzzard froze up everything in Caddo in 1916.

Magnolia Petroleum Co. got 5⅜-inch casing cemented at 6,947 feet on No. 1 McCook & Hibbler, Section 22-21-10, Cotton Valley district of Webster Parish, after getting through two pinches in the second string and is scheduled to test next week.

The big play now is in the Carterville district of Bossier Parish and across the line in Webster, due entirely to Sales & Walker's (Del-La Development Co.) No. 1 Kilgore in Section 31-23-11, which deepened from 3,063 to 3,155 feet made 180 bbls. initial and is still pumping and flowing. Seven old wells completed as gassers are either rigging up to deepen or are making more hole and it looks like Louisiana Oil Refining Corp. will have to loop the small line it has into the field from Plain Dealing or lay a larger one. Standard Pipe Line Co. was reported building a line into the pool but is not, so far as any confirmation goes. If production is sufficient to warrant, a tap may be run from the Arkansas-Shreveport-Baton Rouge main line; but not yet.

Dixie district of Caddo Parish has rather faded from the picture with only one well, Old River Oil Corp.'s No. 1 Byrd, a mile or two east of production being particularly interesting—and it has a fishing job on hand. Somebody kicked a slip into the hole, or it fell in, and so far they have not managed to get it out. T. C. Adams and others' No. 1 Dickson, Section 10-19-14, a quarter of a mile northeast of Onyett and others' potential extension, was a salt water hole at 2,632 feet. The Onyett well is waiting on standard rig and making occasional heads from 2,444 feet. Eylers Oil & Gas Co.'s No. 1 Stentell, Section 9-19-14, was a dry hole at 2,501 feet. The Texas Company completed No. 6 Hunter, Section 9-19-14, at 2,436 feet, pumping 40 bbls. In the Oil City district, Gulf Refining Co. completed No. 20-A Levee Board, Section 34-21-16, pumping 60 bbls.; total depth 1,830 feet, and has derrick up for No. 21-A in the same lease and section.

Richland Parish Crater

Northern Louisiana Natural Gas Co.'s No. 4 Boykin, Section 20-17-6, Richland Parish, drilled as a third relief well to kill the crater of No. 1 Boykin, failed in that mission. After pumping water for a week or two into the crater, the latter is still alive, and No. 4 is finished as a gasser gauging 50,625,000 feet of gas at 950 pounds, total depth 2,400 feet. Average rock pressure of Richland wells has fallen to 850 pounds but wells in the immediate vicinity of this crater show a volume and pressure surprisingly high in view of the circumstances. Hope Producing Co.'s No. 1 L. R. Hemler, in Section 22-16-6, gauged 48,132,000 feet of gas from 2,450 feet; No. 1 H. L. Thomason, in Section 11-16-6, gauged 15,704,000 feet at 810 pounds from 2,458 feet, and Magnolia Petroleum Co.'s No. 5 C. M Noble, in the southwest corner of the proven area, measured 45,720,000 feet at 925 pounds, total depth 2,401 feet. As most of the wells in this immediate vicinity, and the Magnolia's in particular, have not been so very gratifying in their results, this well does much to take the sting out of poor reward for previous exploration.

Over in the opposite corner of the Richland area, Shreveport Contractors' No. 1 Buie, in Section 17-15-7, showed for production and is arranging to set 6-inch at 2,361 feet for a test. This is an old well, 7 miles or so southeast of nearest production and was written off as a dry hole at 1,946 feet when the previous operators were unable to go on with it. The "dope" is that there is a fault between it and the main body of the Richland Field and that it is checking entirely different from proven area wells.

Palmer Corp.'s No. 1 Eubanks, in Section 26-17-6, a deep test for the 2,900-foot gas apparently has missed so far as it has gone for a drill stem test at 2,917 feet was dry. As it is somewhat shallower at this depth than the discovery well in the deep area, there is still reason to think it will hit. At any rate, it is arranging to deepen. Industrial Gas Co. repeated Northern Louisiana Gas Co.'s experiences with the three offsets to No. 1 Boykin crater when No. 1-C Sartor, Section 21-16-6, blew out with wild gas that had got into the shallow water at around 200 feet. This does not look so well. No. 1-C Sartor is rather farther removed from the crater than either of the Northern Louisiana's relief wells and the fact that it blew out from the surface water sand whence two of the Northern Louisiana's wells staged the same performance, makes it look like the 2,400-foot gas is spreading. In that event, Richland operators have a very grave problem to take care of; one which the sooner they get together on new remedial measures, tried or otherwise, the better.

Zwolle District

Zwolle district of Sabine Parish did not make good on last week's indications. A. H. Tarver's No. 1 Long-Bell, Section 29-8-13, which made a show of oil and gas at 3,625 feet, has not yet made good. Bailing liner when last reported, it had neither discouraged nor encouraged hopes of proving Zwolle production 4 or 5 miles north of R. L. Gay's three producers. Gay set 8¼-inch pipe at 2,413 feet this week on No. 1-A Bowman-Hicks Lumber Co., Section 34-8-12, his deep test at Loring 12 miles east of his Zwolle wells but on what he claims is the same structure. It is quite interesting to see how this wildcat will turn out. Magnolia Petroleum Co.'s No. 4 E. E. Hall, Section 33-12-10, Pleasant Hill district of Sabine, an offset to production, swabbed 150 bbls. from 3,239 feet and was reported running 2½-inch tubing with packer; No. 5 on the same lease is a location.

(Continued on Page 129)

LOUISIANA-ARKANSAS PROVEN AREAS

NORTH LOUISIANA

BOSSIER PARISH—BELLEVUE

Company, farm and location—	Remarks—
H. L. Morgan's No. 2 Wetherbee, 3,811 ft. E, 200 ft. S, NW cor., Sec. 28-19-11	Tested dry; arranging to deepen; 1,932 ft.

BOSSIER PARISH—CARTERVILLE

Del.-Lal. Dev. Co.'s No. 5 Bollinger, Sec. 31-23-11	Rig up.
Goodman-Johnson's No. 1 Martin, 330 ft. S, 330 ft E. NW cor. SE, Sec. 26-23-12	Began drlg. Nov. 13; cmtd. 10-in. 103 ft; drlg. 1,600 ft.
Magnolia Pet. Co.'s No. 1 Robertson, 412 ft. S, 660 ft. E, NW cor. SW NE, Sec. 26-23-12	O.W.D.D; rigging up to deepen; 3,058 ft.
Muslow Oil Co.'s No. 1 Barnett, 1,320 ft. W, 660 ft N, SE cor., Sec. 25-23-12	O.W.D.D; rigging up to deepen; T.D. 3,076 f..
Muslow Oil Co.'s No. 1 Kilgore, 2,080 ft. N, 1,980 ft. E, SW cor., Sec. 31-23-11	O.W.D.D; arranging to deepen; T.D. 3,078 ft.
Muslow Oil Co.'s No. 1 Mark Myer, 1,980 ft. N, 330 ft W, SE cor., Sec. 36-23-12	O.W.D.D; arranging to deepen; T.D. 3,088 ft.
Muslow Oil Co.'s No. 1 Peyton, Sec. 30-23-11	O.W.D D; rigging up to deepen; T.D. 3,042 ft.
Northwest La. Gas Co.'s No. 5 Bolinger, 252 ft. E, 200 ft. S, NW cor. Lot 7, Sec. 31, in Sec. 38-23-11	Rigging up.
R. D. Smitherman, trustee's No. 1 Kilgore, 1,310 ft. E, 675 ft. S, NW cor., Sec. 31-23-11	O.W.D.D; rigging up to deepen; T.D. 3,062 ft.

BOSSIER PARISH—ELM GROVE

La. Gas & Fuels Co.'s No. 1 T. A. Lawrence, 3,300 ft. N and W, SE cor., Sec. 12-17-12	Began drlg. No. 15; cmtd. 12½-in. 124 ft; drlg. 652 ft.
La. Gas & Fuel Co.'s No. 1 Murff et al, 660 ft. S, 1,980 ft. W, NE cor., Sec. 24-17-12	Began drlg. Nov. 15; cmtd 12½-in. 121 ft.
Palmer Corp.'s No. 12 Caplis, 3,400 ft. N, 600 ft. W, SE cor., Sec. 25-16-12	Began drlg. Nov. 8; cmtd. 10-in. 200 ft; 6-in. 1,860 ft.
Palmer Corp.'s No. 14-B Hodges, C E½ SW, Sec. 24-17-12.	Tested estimated 2,000,000 ft. gas; arranging to siphon 1,880 ft.

CADDO PARISH—GREENWOOD

Calatex O. & G. Co.'s No. 1-A Agurs, 819 ft. S, 157 ft. E, NW cor. SW, Sec. 7-16-16	Drlg. 2,100 ft.
Eastern Carbon Co.'s No. 1 Z. Abney, Sec. 8-17-16	S.D. 2,435 ft.

CADDO PARISH—HOSSTON

Bayou State Oil Corp.'s No. 28 Jolly, 500 ft. N, 150 ft. W, SE cor. NE, Sec. 22-22-15	Began drlg. Nov. 11; cmtd. 10-in 40 ft; 6-in. 990 ft; bailing to test; T.D. 1,014 ft.
Bayou State Oil Corp.'s No. 18 Levee Board, 450 ft. N, 150 ft. E, SW cor. NW, Sec. 23-22-15	W.O.S.R; T.D. 1,003 ft.

CADDO PARISH—DIXIE

Fitzsimmons Drlg. Co.'s No. 1 Sentell, C W½ NW SW SW, Sec. 10-19-14	Location.
Sam Gold's No. 3 Hunter, 660 ft. N, 660 ft. W, SE cor. SW NE, Sec. 17-19-14	200 ft. oil and S.W. in hole 2,457 f.; W.O.S.R; topped broken sand 2,415 ft.

(Continued on Page 123)

WILDCAT OPERATIONS IN LOUISIANA-ARKANSAS

NORTH LOUISIANA

BOSSIER PARISH

Company, farm and location—	Remarks—
Corbett et als' No. 1 Murff, SE cor. NE, Sec. 18-17-11	S.D. 990 ft.
Sam Gold's No. 1 McFarlin, SE cor. SW SW, Sec. 7-19-13	Rigging up.
Neil & Lanier's No. 1 Biedenharn, SE cor., Sec. 23-21-14	W.O.S.R.; 980 ft. oil in hole; T.D. 998 ft.; arranging to re-test at 998 ft.
S. P. Lanier's No. 1 Le Rosen, 300 ft. S., 1,600 ft. W. NE cor. Sec. 26-21-14	Derrick.
G. D. Nesbit's No. 1 Leonard, 1,900 ft. N, 957 ft. E. SW cor. Sec. 20-19-13	Drill stem test 6 ft. sand 998 ft; dry; arranging to deepen.
Walker et als' No. 1 Antrim, NW cor. SE, Sec. 28-22-13	Tested dry; W.O. 3,184 ft.
Woodmansee et als' No. 1 Bollinger, SE cor. NE, Sec. 9-22-11	Dry and abd. 3,532 ft.

CADDO PARISH

Haynes Bros.' No. 4 Oden, 1,650 ft. S., 330 ft. W, NE cor. Sec. 20-19-14	Cored sand showing S.W. 2,471 ft.; W.O. 2,505 ft.; may make deep test; waiting order 2,505 ft.
Lide ta als' No. 1 Levee Board, 200 ft. S, 200 ft. W, NE cor. Sec. 24-19-15	S.D.; W.O. 2,475 ft.
R. W. Norton's No. 1 Hill, 630 f.. N, 1,260 ft. W, SE cor. NE, Sec. 22-22-16	Casing 3,979 ft.
S. T. Oynett, trustee's No. 1 Dixon, SW cor. Sec. 10-19-14	W.O.S.R.; making small heads; T.D. 2,444 ft.
I. N. Pharlss, trustee's No. 1 Oden, NE cor. SE NE, Sec. 16-19-14	S.D. 2,322 ft.; topped sand at 2,396 ft.; set 6⅝-in.; T.D. 2,409 f..
Planters Oil Co.'s No. 1 Pittman, 200 ft. S, 200 ft. E. NW cor. NE, Sec. 23-19-14	Deep sand test 6 ft. broken sand 2,502 ft.; dry show oil; casing 2,530 ft.; S.D. waiting orders 2,585 ft.
Woodley Pet. Co.'s No. 5-A Knight, 26,185 ft. E. 660 ft. N, SW cor. Township 16-12	Location.

CALDWELL PARISH

Louisiana Oil Ref. Corp.'s No. 1 La. Central O. & G. Co., 200 ft. N, 210 ft. W, SE cor. Sec. 31-12-3e	Drlg. shale 1,500 ft.

CATAHOULA PARISH

Lochnager Pet. Co.'s No. 1 Taliaferro, 572 ft. E, 396 ft. S, C, Sec. 26-9-6	S.D. 900 ft.

CLAIBORNE PARISH

El Dorado Chief Oil Co.'s No. 1 Dance, C SW NE, Sec. 27-20-7	S.D. 2,240 ft.
Leue Oil Co.'s No. 1 Taylor, Sec. 16-22-6	Derrick.
Triangle Drlg Co.'s No. 1 Kilpatrick, 660 f.. S, 660 ft. E. NW cor. SW NE Sec. 7-19-5	Drlg. 2,745 ft.

DE SOTO PARISH

Benson Oil Co.'s No. 1 Harris, Sec. 6-10-13	Drlg. 1,800 ft.
Benson Oil Co.'s No. 1 Hill, 1,845 ft. S, 1,200 ft. W, NE cor. Sec. 4-10-13	Cmtd. 10-in. 265 ft.; drlg 700 ft.
P. J. Becker, trustee's No. 1 Tull, SW cor. NE NE, Sec. 23-12-15	Fishing 7 joints drill stem; T.D. 2,475 ft.
Longstreet Synd.'s No. 1 Ramsey, NE cor. SW NE, Sec. 33-13-16	Changing to heavy rig and arranging to side rack; T.D. 2,302 ft.

(Continued on Page 124)

Gushers Keep Coming in Okla. City

I.T.I.O. Has 20,000-Bbl. Well in No. 2 Trosper. It Has Joined the Shut-Ins in Accordance With Proration Orders

By W. A. Spinney
Staff Correspondent, Oklahoma Fields

Another oil well was added to the Oklahoma City Pool over the week end increasing its potential production by approximately 20,000 bbls. a day. The Indian Territory Illuminating Oil Co.'s No. 2 Trosper, SW cor. Section 13-11-3w, blew in Sunday morning November 24, for about 800 bbls. an hour. The first 5 hours it made 4,404 bbls. The last string of casing was landed at 6,374 feet, and total depth is 6,392 feet. It produced 15,606 bbls. in 19 hours, ending at 7 a. m. November 25. It offsets two other large producers, Hall & Briscoe's No. 1 Childs, and Coline Oil Co.'s No. 2 Olds.

The Oklahoma City Pool has 30 completed producers and 146 drilling tests and only five rigs up. The total potential production of the completed wells in the pool has been estimated to be between 175,000 bbls. and 200,000 bbls. daily. The field is being curtailed 40 per cent of its potential during the month of November, and will be curtailed 50 per cent of its potential during the month of December.

The field is making large quantities of water from the same horizon the oil is producing from. On the report of November 22, 17 of the 30 wells completed were making water.

A new peak in production for the Oklahoma City Pool was reached last week when both the "A" and "B" wells were open for two days. The field made 92,099 bbls. from 26 wells in 24 hours ending at 7 a. m. November 21. The following day's production was 80,150 bbls. from the same "A" and "B" wells.

Indian Territory Illuminating Oil Co. and others' No. 1 N. Emerson, NE cor. SW, Section 30-11-2w, made 120,000,000 feet of gas at a total depth of 6,412 feet, in Arbuckle lime which was topped at 6,371 feet.

The deepest drilling test in the Oklahoma City area is the Prairie Oil & Gas Co. and others' No. 1 Sudik, C NE NE, Section 8-10-2w, Cleveland County, about 5 miles south of the main part of the pool. This wildcat test was drilling at 7,455 feet, on November 23, in lime, the top being at 7,442 feet.

The discovery well in the Oklahoma City Pool, the Indian Territory Illuminating Oil Co. and others' No. 1 Fee, C SE SE, Section 24-11-3w, is expected to pass the 1,000,000-bbl. mark in recovery in less than one year's time. The well blew in December 4, 1928, and flowed 4,800 bbls. the first 24 hours from the pay horizon at 6,357-6,402 feet. After being deepened it produced as much as 6,250 bbls. It has recently been drilled to a total depth of 6,564 feet.

6,300-Bbl. Well

Mid-Kansas Oil & Gas Co.'s No. 5 Fortson, SE cor. SW NE, Section 24-11-3w, has been completed making 6,346 bbls. the first 24 hours. It was the second well completed on this lease last week. It blew in from a total depth of 6,562 feet. Casing is set at 6,217 feet.

Another wild gas well has been found in the Indian Territory Illuminating Oil Co. and others' No. 2 Wheeler, SE cor. NW SE, Section 13-11-3w. It was flowing and breaking out through crevices 300 feet from the rig, from a total depth of 6,114 feet. It was estimated to be making 20,000,000 feet of gas. Workmen were pumping mud into the hole with the hope of killing the flow of gas. It had been bailed down 1,500 feet, when the gas broke through, while the crew was landing the 5-inch casing.

Mid-Kansas Oil & Gas Co.'s No. 1 Mollman, SE cor., Section 23-11-3w, an important test on the west side of the pool is expected to be completed in the next few days. It was bailing the hole Monday, November 25, at a total depth of 6,400 feet. If production is found in this well it will extend the producing area a half mile to the west.

Big Well in Southern Sector

The southern part of the Oklahoma City Pool was brought into prominence last week when the Sinclair Oil & Gas Co. and Amerada Petroleum Corp.'s No. 2 Kinter, SW cor. SE, Section 30-11-2w, the most southern producer in the field, flowed 435 bbls. the first hour. It made 7,205 bbls. the first 24 hours. It has extended the production a half mile south and makes other tests drilling in that area promising. The well is shut in for the 30-day proration period.

Skelly Oil Co.'s No. 1 Hoopes, NW cor. NE, Section 31-11-2w, the south offset to the Sinclair Oil & Gas Co. and Amerada Petroleum Corp.'s No. 2 Kinter well, was drilling at 6,237 feet, and is believed to be about 100 feet above the pay horizon.

Oklahoma County Wildcats

Another semiwildcat test a half mile north, Tom Slick Oil Co.'s No. 1 Hussman, SW cor. NW SW, Section 29-11-2w, was drilling at 4,200 feet. Same company's test, No. 1 Banta, SE cor. SW SE, Section 18-11-2w, was drilling at 5,700 feet, and some geologists believe the formations in this test to be running low. Same company's No. 2 Banta, NE SW SE, Section 18-11-2w, was shut down at 5,510 feet, waiting to see the results in No. 1 Banta. These drilling tests are the most easterly in the field and will determine the eastern edge of the pool. Ryan Consolidated Petroleum Corp.'s No. 1 Lawton, NE cor. NW, Section 3-11-2w, a wildcat east of the pool, was drilling at 2,650 feet.

Field Extended Half Mile South

An important semiwildcat test in the south end of the field is Sinclair Oil & Gas Co.'s No. 1 School Land, NE cor., Section 36-11-3w, which drilled the cement plugs at 6,400 feet. It blew in late Friday, November 22, and made 5,355 bbls. the first 18 hours, and 6,683 bbls. the first 24 hours. It has been shut in for the 30-day proration period. It has extended the field a half mile south.

Seminole Production Is Off

Production in the Seminole Field for the week ending November 20 averaged 9,100 bbls. less than the previous week. Most of the pools show declines, the East Little River and East Seminole Pools were the only ones that show gains. The 11 districts included in the Seminole area made 228,221 bbls. a day from 1,714 wells.

East Little River Pool has a 400-bbl. increase in daily average production. Part of the gain was due to Mid-Continent Petroleum Corp.'s No. 13 Smith, a Cromwell sand well in Section 5-7-7, which had been shut in. Four new Wilcox sand wells will be drilled into the sand next week, and production in the pool is expected to show an increase. Some of the new producing wells that were added to the area last week were the Gypsy Oil Co.'s No. 2 Walker, NW cor. SW SE, Section 5-7-7, which found the Wilcox sand at 4,213-33 feet, and swabbed 642 bbls. in 10 hours. It gives promise of being one of the best producing wells so far completed in the pool. Prairie Oil & Gas Co.'s No. 3 Smith, has been shot with 10 quarts and later swabbed 700 bbls. in 18 hours, from Wilcox sand at 4,195-4,224 feet.

Little River Pool was quiet. One new gas well was completed last week, Prairie Oil & Gas Co.'s No. 5 Harris, NW cor. NE SW, Section 14-7-6, which made 21,000,000 feet of gas from the Cromwell sand at 3,194-3,201 feet.

New Wells in East Earlsboro

East Earlsboro production did not not show any increase in the week ending November 20, although four new wells were added to the pool. These new wells were drilled in to gauge the possibilities of their production and also to ascertain the limits of the producing area before being shut in on account of proration. Sinclair Oil & Gas Co.'s No. 6 Nichols, SE cor. NE NW, Section 19-9-6, was the largest. It made 5,685 bbls. the first 24 hours, from the Wilcox sand at 4,185-4,212 feet. It has been shut in. Prairie Oil & Gas Co.'s No. 1 Jefferson, NE cor. NW SE, Section 19-9-6, had Wilcox sand at 4,137-52 feet, and was swabbing 40 bbls. per hour. Shell Petroleum Corp.'s No. 1 Hopper, in Section 19-9-6, swabbed 1,490 bbls. in 24 hours from the Wilcox sand at 4,169-91 feet, and was still swabbing 75 bbls. an hour. Same company's No. 3 Hopper, NE cor. SE NE, Section 19-9-6, made 1,075 bbls. from Wilcox sand at 4,176-4,200 feet in 16 hours. In addition to the above wells 15 others in the pool are shut down in the Wilcox sand with oil standing in the hole. The majority of these tests will remain shut down until after the middle of December, under proration orders.

The Maud Pool had no new wells. The Misener sand area averaged 300 bbls. a day less than the previous week. McMan Oil & Gas Co. and others' No. 2 Roberts, NW cor. NE SW Section 9-8-5, was still flowing through the 8-inch casing and making 300 bbls. daily. It is to be given a 20-quart shot in hopes of increasing the production.

Several of the wildcats in the Seminole area are approaching the markers which geologists use to determine how the wells are running on structure. Gypsy Oil Co. and Mid-Continent Petroleum Corp.'s No. 1 Brunner, NE cor. SE NW Section 23-8-5, was building a rig. Continental Oil Co.'s No. 1 Harjo, NW cor. SE Section 26-8-6, was drilling at 2,550 feet. Independent Oil & Gas Co.'s No. 1 Johnson, NW cor. Section 20-8-6, was drilling at 3,200 feet.

St. Louis Pool increased its production last week. The increase amounted to better than 2,500 bbls. over the previous week's gauges. The total average production was 51,835 bbls. from 439 wells. The production in the pool was increased by the completion of six new wells.

Asher Pool shows a small decrease which amounts to about 250 bbls. on the daily average from the previous week's gauge.

Sasakwa's production was increased approximately 3,400 bbls. last week. Part of this increase is due to the Pure Oil Co.'s No. 2 Bates, in Section 13-6-7, which is producing an average of 1,700 bbls. daily. The pool averaged 11,777 bbls. daily last week from 30 producing wells for the week ending November 20. Magnolia Petroleum Co.'s No. 1 Spillman, SE cor. NE SE Section 12-6-7, is rigging up to drill deeper from a total depth of 4,131 feet in Wilcox sand. It has been producing an average of 270 bbls. daily.

Production by Pools

The average daily production of the various pools in the Greater Seminole area for the week ending November 20 were as follows:

Pool—	Wells	Bbls.
Little River	346	44,848
East Little River	43	22,500
Carr City	58	12,110
Maud	135	8,990
Mission	110	15,784
Bowlegs	295	25,539
Earlsboro	295	36,107
East Earlsboro	48	24,995
Seminole	273	25,368
East Seminole	28	4,517
Searight	84	9,469
St. Louis	439	51,836
Asher	24	4,358
Sasakwa	30	11,777
Allen	232	20,583
Total	2,440	318,781

During the last month approximately

WILDCAT OPERATIONS IN OKLAHOMA

(Descriptions are East and North unless marked otherwise)

NORTHERN OKLAHOMA

ALFALFA COUNTY

Company, farm and location—	Remarks:
Smith Bros.' No. 1 Forbes, SE cor. NW NW Sec. 12-27-11w	Shut down 1,232 ft.
J. W. Bailey's No. 1 Acre, SW cor. NE Sec. 14-24-11w	Drlg. 4,560 ft.

BECKHAM COUNTY

Kay and others' No. 1 Martin, C E half E half NW Sec. 32-8-24w	Shut down 2,056 ft.
Producers Exploration Co.'s No. 1 Seidell, SE cor. SW SW Sec. 17-9-22w	Shut down 2,402 ft.
Carson and others' No. 1 Danby, SW cor. SE NE Sec. 20-8-22w	Shut down 1,617 ft.

BLAINE COUNTY

Lowen and others' No. 1 Unknown, NW cor. SW NW Sec. 27-16-11w	Spudded and shut down.
Washoma Oil Co. and others' No. 1 Phillips, C NW SW Sec. 12-19-10w	Shut down 2,935 ft.

CADDO COUNTY

Abernathy & Brown's No. 1 Horton, SE cor. Sec. 8-6-13w	Shut down 535 ft.
W. J. Hartley's No. 1 Galbreath, SE cor. NW SE Sec. 29-5-12w	Shut down 3,394 ft.

CLEVELAND COUNTY

Harris et al's No. 1 Highbee, SE NW Sec. 20-6-1	Rig.
Daniels & LeWright's No. 1 Vandever, C SW Sec. 15-7-1w	Shut down 3,130 ft.
Phillips Pet. and T. B. Slick's No. 1 Sudick, NE cor. NE Sec. 8-10-2w	Drlg. 7,435 ft.

COAL COUNTY

W. E. McGraw's No. 1 King, C SW NE Sec. 11-1-8e	Shut down 1,285 ft.

COMANCHE COUNTY

Green and others' No. 1 Wilson, C NE SW Sec. 14-1-12w	Shut down 4,055 ft.

CREEK COUNTY

Carter Oil Co. et al's No. 1 Clinton, SW NW Sec. 12-15-9	Drlg. 2,075 ft.

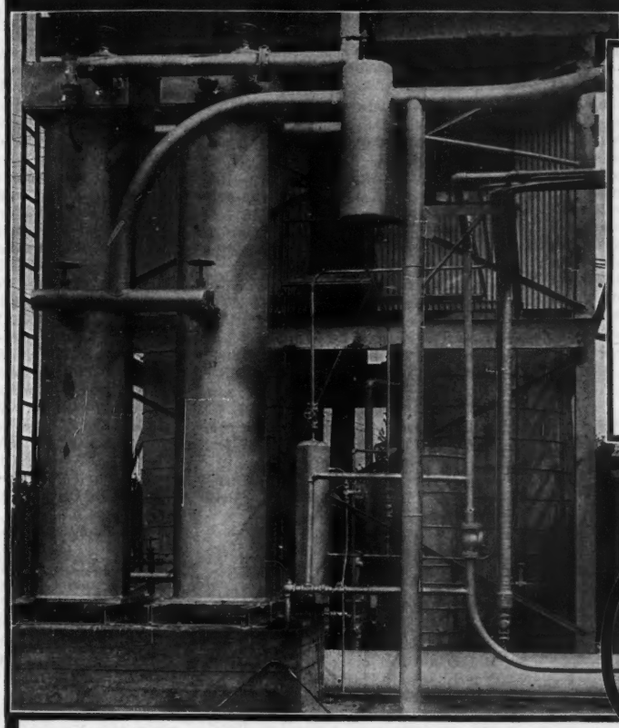
GARFIELD COUNTY

Continental and Barnsdall's No. 1 Brown, CNL SW Sec. 10-20-4w	Rig.
E. L. Love and others' No. 1 White, SE cor. NW Sec. 9-24-6w	Underreaming 5-in. csg. 5,566 ft.

GRADY COUNTY

J. V. Bailey's No. 1 Hubbard, C NE NW Sec. 1-10-5w	Spudded and shut down.
J. M. Henry and others' No. 1 Abraham, SE cor. NW Sec. 4-5-8w	Rig.

(Continued on Page 121)



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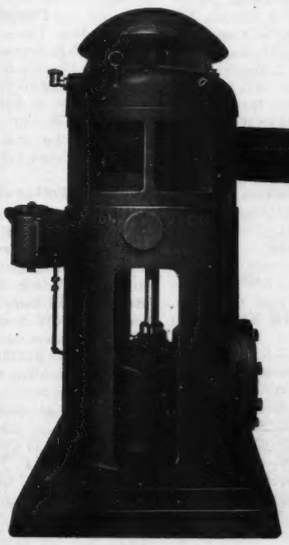
Byron Jackson Deepwell Turbine Pumps installed in bored wells offer an inexpensive and reliable water supply for industries. This company was the first to develop the deepwell turbine principle some thirty years ago and in the intervening years this pump has been improved and refined until today it is standard equipment with many large pump users. The pumping element is hydraulically efficient without sacrificing strength and ruggedness. The drive shaft is totally enclosed from top to bottom and oil lubricated where it operates in bronze bearings spaced six feet apart. Strongly and simply constructed, the discharge head has the driving motor built in as an integral part. Thrust bearing and adjusting nut are on top of motor, readily accessible.



Fine materials and careful workmanship, together with time-tested design, insure years of efficient, trouble-free operation. In addition to Deepwell Turbine Pumps, this company manufactures a complete line of centrifugal pumps for every service. Write or call the nearest branch for information about pumps to meet your requirements.

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CENTRIFUGAL PUMPS FOR EVERY SERVICE

500,000 bbls. of storage oil has been moved out of Seminole area. The majority of pipe line companies have been able to decrease their over abundant stocks on account of the curtailment of production in Oklahoma. Pipe line companies have been forced to draw on storage to meet the requirements, most of the oil had been contracted for earlier in the year before proration went into effect. This movement of oil out of storage helps to stablize the crude oil market.

The Red Bank Oil Co.'s No. 1 Fee, in Section 23-9-24, Le Flore County, has rebuilt the rig for this wildcat and is fishing tools lost in the hole when the rig burned down. The test is making about 15,000,000 feet, from a total depth of 5,401 feet.

Southwestern Developments

A few major oil companies have started buying acreage in a northwest trend from the Palacine area in Section 9-2s-6w, Stephens County, southern Oklahoma.

Several new locations were made in Palacine Field following the completion of the Wirt Franklin Petroleum Corp.'s No. 1 Green, NE cor. SE NE, Section 8-2s-6w, Stephens County, which made 800 bbls. the first 18 hours, from the pay horizon at 3,164-90 feet. It has extended the production a quarter mile northwest. Same company has staked its No. 2 Spain, in the SW cor. NW, Section 9-2s-6w, and No. 2 Brooks, a twin to No. 1 Brooks, a gas well, in the SE cor. NE, Section 8-2s-6w. Magnolia Petroleum Co.'s No. 2 Andrae, a twin to No. 1 Andrae, a gas well, is a rig on the ground. Clark & Cowden and others' No. 1 Andrae, in the SW cor. SE SE, Section 5-2s-6w, is a location. Same company also has a location for No. 1 Howard, in the SE cor. NW, Section 5-2s-6w. On the southeast side of the field the Wirt Franklin Petroleum Corp.'s No. 1 Bonner, NW cor. SW, Section 9-2s-6w, was drilling at 3,920 feet, in gray lime. Same company's No. 1 Martin, NE cor. NW SW, Section 9-2s-6w, was drilling at 2,650 feet, in black shale.

Granite Wash Tests

Several tests are drilling in the granite wash. Pierce & Brown's No. 1 Harley, NW cor., Section 30-2s-6w, Stephens County, was drilling at 3,770 feet, in gray shale. Carter Oil Co.'s No. 6 Carter-Kearns, SW cor. NE SE, Section 21-3-5w, Grady County, was drilling at 5,255 feet, in shale. Chanault & Staley's No. 1 Crane, in Section 25-4s-14w, Tillman County, wildcat, was drilling at 2,103 feet in sandy lime, top of the lime was found at 2,094 feet.

Indian Territory Illuminating Oil Co.'s No. 1 fee, Section 17-6-24w, Greer County, was cleaning out at a total depth of 1,902 feet in granite wash. Helmerich & Payne's No. 1 Houch, in Section 23-6-24w, Greer County, was fishing at 2,200 feet in granite wash. Kay & Martin's No. 1 Martin, in Section 32-8-24w, Beckham County, was landing 8-inch casing at 2,050 feet, with the total depth of the hole 2,056 feet.

Beaver County, in the Oklahoma Panhandle, is being blocked and a wildcat test may be started in the county in the near future. Magnolia Petroleum Co. has a block in Township 2n-24e, Beaver County. Empire Oil & Refining Co. has a 10,000-acre block in Townships 3n-27e, 2n-27e, 1n-27e (all Cimarron Meridian), Beaver County. Sinclair Oil & Gas Co.'s No. 1 Howell, C SW SW, Section 14-26-24w, Harper County, is still fishing for rotary drill pipe at a total depth of 6,161 feet. Part of the pipe has been recovered. Same company's No. 1 Stewarr, C NE SW, Section 33-27-16w, Woods County, was drilling at 5,754 feet. This test had a showing of oil at 5,405-15 feet, and 2,000,000 feet of gas at 5,603-12 feet. Bu-Vi-Bar Petroleum Corp. and others' No. 1 fee, SE cor. SW, Section 10-25-15w, Woods County, was drilling at 6,010 feet, in black shale. Prairie Oil & Gas Co.'s No. 1 Wilber, NE cor., Section 23-23-17w, Woodward County, was drilling at 5,820 feet in shale. Harris & Haun's No. 1 Wyatt, C SE, Section 9-23-20w, Woodward County, was fishing for a bit at 4,969 feet. Peerless Oil & Gas Co.'s No. 1 Cromwell, C NW NE, Section 23-28-16w, Woods County, has recemented the 15-inch casing at a total depth of 1,093 feet in the new hole. It was expected to start drilling out the cement the early part of the week.

Champlin Oil & Refining Co. may drill a wildcat test in the SE, Section 25-23-3w, Garfield County. It will adjoin the townsite of Garber.

In Payne County

Shaffer Oil & Refining Co.'s No. 3 Little Chief, NE cor. NW NE, Section 4-18-5, Payne County, had the Mississippi lime at 3,287-3,316 feet. It flowed 350 bbls. the first 24 hours. The well was deepened to a total depth of 3,319 feet, and made 1,220 bbls. the first 24 hours after deepening and 1,890 bbls. the second 24 hours, ending November 20. It is not making any water which is unusual from this formation, and it is the largest producer from that horizon ever found in that area. The other producing wells in the Wilcox sand have been holding up encouragingly. Same company's No. 2 Little Chief, SW cor. NW NE, Section 4-18-5, averaged 390 bbls. from the Wilcox sand found at 3,482-3,534 feet. Same company's other producing well, No. 2 Echo Hawk, NW cor. NE, Section 9-18-5, Payne County, averaged 285 bbls. for the week ending November 20, from the Wilcox sand at 3,573-91 feet.

Seminole Pipe Line Runs

The daily average pipe line runs from the Seminole area for last week were 231,660 bbls., which is a 10,000-bbl. decline from the previous week. Runs by companies for the week ending November 20 were as follows:

Company—	Bbls.
Barnsdall	2,720
Champlin	4,626
Continental	711
Consolidated	709
Cosden	11,030
Empire	4,511
Gulf	30,640
Magnolia	8,114
Oklahoma	45,204
Prairie	39,097
Producers & Refiners	832
Pure	3,445
Shaffer	3,519
Shell	6,100
Sinclair	23,451
Texas	17,352
Tidal	17,449
White Oak	2,147
Total	221,657
Tank cars	10,003
Grand total	231,660

Magnolia Pipe Line Co. started taking oil from the Oklahoma City Pool November 15. All the oil the company takes from this pool at the present time is going to storage, until the 8-inch pipe line now under construction is completed from Purcell, Okla., when the oil will be run to the main line at that point.

Carter County

Magnolia Petroleum Co. has the rig up for No. 5 Anderson, NW cor. Section 23-1s-3w. No. 4 E. Gill, SW cor. NE SE Section 23-1s-3w, has been completed for 307 bbls. in sand 2,568-82 feet, total depth 2,768 feet. Carter Oil Co.'s No. 8 Dixon, SE cor. SW NW Section 30-1s-3w has been completed for 37,000,000 feet of gas in sand 2,630-40 feet. Arclow Oil Co.'s No. 1 Cruce, NW cor. SE Section 35-4s-2w, has been abandoned at 4,810 feet. The Prairie Oil & Gas Co.'s No. 1 McCartney, NW cor. SE Section 30-1s-3w has been deepened to sand 2,858-69 feet and completed for 775 bbls.

Creek County

Phillips Petroleum Co. and others moved a machine in for No. 3 Koch, NW cor. SW NE NE Section 20-19-9. Jackson & Wise's No. 1 Grayson, NE cor. SE SE Section 20-18-9, an old well drilling deeper from 2,849 feet, is making 260 bbls. from Dutcher sand 2,849-54 feet. Texas Pacific Coal & Oil Co.'s No. 1 Harjoche, SE cor. NE Section 21-17-9, an old well being deepened from 2,484 feet, is setting 6-inch casing at 2,587 feet. Ted Ray Oil Co.'s No. 1 Smiles, SW cor. NE NE Section 13-17-10, is rigging up to deepen. C. O. Buckles and others moved a machine in for No. 1 King, C SE SW Section 18-17-10. Reserve Oil Co. has a machine on the ground for No. 1 Davis, SE cor. SW Section 3-16-10. Shaffer Oil & Refining Co. and Billingslea's No. 4 Lewis, NW cor. SW SW Section 10-15-8, is a rig on the ground. Logan & Kistler and others' No. 2 K. Harjo, SW cor. NW NW Section 27-14-10, is a rig. Foster Petroleum Co. and others' No. 1 Monday, NW cor. NE SW Section 25-19-8, has been completed for 145 bbls. in Skinner sand, 2,354-93 feet. Shaffer Oil & Refining Co.'s No. 1 Knight NE cor. Section 16-15-8, has been abandoned at 3,330 feet. Troy Oil Co.'s No. 13 Cousins, C E half NE Section 2-15-11, made 17 bbls. in sand 1,773-1,808 feet. Atlantic Oil Producing Co.'s No. 1 Reynolds, SW cor. NW NE Section 16-14-10, has been completed for 30 bbls. in Wilcox sand 3,343-51 feet.

Cotton County

Wirt Franklin Petroleum Corp.'s No. 6 Chambers, CWL SW SE Section 35-1s-10w, is drilling at 1,630 feet. No. 7 Chambers, SW cor. SE Section 35-1s-10w, is drilling at 50 feet. Shasta Oil Co.'s No. 1 Indian, NW cor. SE Section 1-2s-10w, is drilling at 500 feet. No. 10 Slogan, CNL NW NE Section 2-2s-10w, is rigging up. Razor & Aikens' No. 2 Chambers, CEL SE SW Section 35-1s-10w, is flowing 19 bbls. from sand 2,147-69 feet. Shasta Oil Co.'s No. 1 Watkins, NE cor. SW Section 1-2s-10w, has been completed for 45 bbls. in sand 2,230-35 feet. No. 3 Cobb, CNL S half NE Section 2-2s-10w, made 130 bbls. in sand 2,134-45 feet. No. 8 Slogan, CSL N half NE Section 2-2s-10w, has been completed for 160 bbls. in sand 2,148-67 feet.

Garvin County

Magnolia Petroleum Co.'s No. 6 Harris, SE cor. SW NW Section 16-1-3w, is drilling deeper at 1,970 feet.

Grady County

Magnolia Petroleum Co. made location for No. 4 Dryden, NE cor. NW NE Section 35-5-8w. Location was also made for No. 5 Heatley, NW cor. SW NE Section 2-4-8w. No. 9 Smith, SW cor. SE NE Section 35-5-8w, has been completed for 10,000,000 feet of gas in sand 2,195-2,396 feet. No. 4 Harrison, SE cor. NE NE Section 28-3-5w, was completed for 7,000,000 feet of gas in sand 1,856-70 feet, tota ldepth 1,900 feet.

Hughes County

Independent Oil & Gas Co.'s No. 1 Brown, SE cor. SW NE Section 18-9-9, is cleaning out to deepen from 3,432 feet. Troutt Drilling Co.'s No. 1-A Bird, C NW NW Section 5-8-11, is dry and abandoned at 1,604 feet.

Kiowa County

W. C. Adams' No. 2 Brazil, SW cor. NE Section 34-7-17w, is running 8-inch casing to 591 feet. Russell & Sloan's No. 1 Weidel, NW cor. SE NE Section 32-7-16w, has drilled to 50 feet and shut down. McWirter and others' No. 2 Menton, NE cor. SW SW NW Section 4-6-16w, is drilling at 100 feet. Eugene Burke's No. 1 James, NE cor. NW NW SW Section 4-6-16w, is drilling at 50 feet.

Lincoln County

Blackwell Oil & Gas Co.'s No. 1 Harmon, SE cor. SW NW Section 25-17-3, has been completed for 500,000 feet of gas in sand 3,895-3,905 feet.

Marshall County

C. B. Goddard has a machine on the location for No. 2 McComas, SW cor. Section 13-5s-5. Bilbo Oil Trust Co.'s No. 2 Taleffero, SE cor. SW NE NE Section 14-5s-5, is a machine. No. 1 Null, SE cor. NW NW Section 24-5s-5, is drilling at 100 feet. F. W. Merrick moved a machine in for No. 1 Null, NW cor. Section 24-5s-5. Carter Oil Co.'s No. 2 Davidson, NE cor. SW NW NW Section 30-5s-6, is a machine. C. B. Goddard Oil Co.'s No. 1 McComas, SW cor. Section 13-5s-5, has been completed for 108 bbls. in sand 515-32 feet. Carter Oil Co.'s No. 1 Davidson, SE cor. SW NW NW Section 30-5s-6, made 19 bbls. in sands 601-19 feet and 634-44 feet.

Noble County

Midco Oil Co. made location for No. 2 Smizer, NW cor. NE NE Section 21-24-1w.

Okfuskee County

Tidal Oil Co. and Ed Jilson's No. 1 Barnett, SE cor. NE NE Section 30-12-9, is an old well rigging up to deepen from 3,975 feet. Mid-Continent Petroleum Corp. made location for No. 1 Phillips, NE cor. SW Section 32-12-10. Independent Oil & Gas Co. has the rig on the ground for No. 2 Wilson, SE cor. SW NW Section 22-12-11. Summitt Drilling Co.'s No. 1-A Jefferson, SE cor. SW Section 23-11-11, is making 25 bbls. from sand 2,040-60 feet. Schoenfeldt and others' No. 5 Hawkins, SE cor. NE SW Section 4-11-12, is drilling at 110 feet. A. Moffett and others' No. 4 Summers, SW cor. NW NW Section 8-11-12, is a rig. E. L. Robinson and others' No. 6 Berryhill, C SE SW Section 35-11-9, has been completed for 12 bbls. in sand 1,481-87 feet. Champlin Oil & Refining Co.'s No. 10 Holmes, NE cor. NW Section 22-11-11, made 140 bbls. in Wilcox sand 3,490-3,502 feet. T. C. Inglehart's No. 1 Barnett, NE cor. SE NW Section 28-9-10, made 15,000,000 feet of gas in sand 2,320-2,780 feet.

Oklahoma County

Coline Oil Co. is digging the cellar for No. 8 Olds, C NW Section 24-11-3w Oklahoma City Pool. Ben Head, Jr., has the rig up for No. 1 Community, SW cor NW SE Section 34-11-3w.

Osage County

Indian Territory Illuminating Oil Co.'s No. 325, SE cor. NE NE Section 14-23-8, is rigging up to deepen from 2,173 feet. A. G. Oliphant's No. 5, NE cor. SW NW Section 6-23-9, is spudding. Silurian Oil Corp. moved a machine in for No. 58, NE cor. SW SW NW Section 17-23-12. Sterling Oil & Gas Co. has the rig up for No. 17-A, NE cor. SW SW SW Section 12-21-11. Winona Oil Co.'s No. 8, C E half W half NE Section 20-29-9, made 80 bbls. in Peru sand 1,548-78 feet. Jennings Oil Co.'s No. 2, SW cor. NW SW Section 32-29-12, is dry and abandoned at 1,042 feet. Osage Gas Producers Co.'s No. 396, SE cor. SW NW SW Section 29-28-11, made 750,000 feet of gas in lime 1,839-78 feet. Petroleum Drilling Co.'s No. 1, NW cor. SW Section 31-25-8, has been abandoned at 2,885 feet.

Pawnee County

Thompson & Black's No. 1 Mote, NE cor. SW SW Section 14-20-9, is drilling at 375 feet. C. C. Chamberlain has the rig up for No. 2 Coats, CSL SW NW Section 26-20-9. P. M. Kerr and others' No. 1 McCoy, NW cor. SW NW Section 21-20-9, is dry and abandoned at 2,802 feet. Roy Sears and others' No. 6 Wiggs, CNL NE NW Section 35-20-9, has been completed for 70 bbls. in Red Fork sand, 1,985-2,060 feet. National Refining Co.'s No. 2 Zickelfoose, CSL SW SW Section 36-20-9, is dry and abandoned at 2,822 feet.

Pontotoc County

Benedum Trees Oil Co.'s No. 7 Mole, SE cor. NE Section 31-5-5, is rigging up. Payne & Clark's No. 2-A Shields, SW cor. SE Section 20-5-8, is a machine. Homaokla Oil Co. is building the rig for No. 7 Ritchie, SW cor. SE SE Section 1-4-7. No. 5 Ritchie, SE cor. Section 1-4-7, has been completed for 30 bbls. in lime, 2,032-39 feet.

Pottawatomie County

Skelly Oil Co. is erecting the rig for No. 3 Decker, SE cor. SW SW Section 16-7-4, Pearson area. Amerada Petroleum Corp. is building the rig for No. 2 Richardson, SW cor. SE SW Section 16-7-4. Superior Oil Corp.'s No. 2 Songster, SW cor. NW NW Section 8-9-5, Earlsboro Pool, has been completed for 700 bbls. in Wilcox sand 4,353-79 feet. Indian Territory Illuminating Oil Co.'s No. 4 Shouse, SW cor. SE Section 35-8-4, drilled Wilcox sand 4,304-11 feet and plugged back to 4,292 feet and made 107 bbls. Independent Oil & Gas Co. and Darby Petroleum Corp.'s No. 2 F. Davis, SE cor. SW NE Section 15-7-4, has been completed for 207 bbls. in Simpson sand 4,220-63 feet. Gypsy Oil Co.'s No. 5 Green, NW cor. NE SE Section 17-7-4, has been completed for 4,535 bbls. in Viola lime 3,977-4,000 feet. T. B. Slick's No. 3 Alexander NW cor. SE Section 19-6-4 Asher Pool, swabbed 110 bbls. from Viola lime 3,615-24 feet.

Seminole County

Carter Oil Co. has the cellar dug for No. 4 Harber, SE cor. SW SE Section 7-9-6 East Earlsboro Pool. The rig has been moved in for No. 1 Community-Em-

(Continued on Page 74)

Darst Creek Curtailment Is Doubtful

Crude Oil Contract and Suit for Failure to Drill Complicate Efforts at Conservation. Showing in Balcones Fault

By B. D. Stevenson
Staff Correspondent, Southwest Texas Fields

SAN ANTONIO, Tex., Nov. 25.—As for weeks past Darst Creek is the center of discussion in Southwest Texas. This week it is proration with indications that unless some new element is injected into the situation the field will be developed in spite of efforts to effect a proration agreement. Two factors are standing in the way of proration or in the way of any scheme for keeping the field from being immediately and fully developed. They are:

1. Contract of L. C. Turman who owns 17 acres in the heart of the field with production on both sides, to deliver 500,000 bbls. of crude oil as rapidly as possible to the Grayburg Oil Co. at $1.10 a barrel, with plans for constructing his own pipe line out of the field.

2. Suit of D. D. Baker, in which it is understood other land and lease owners join, against the Humble Oil & Refining Co. for $200,000 damages and for cancellation of the company's lease in the field on the ground that the Humble has failed to drill the lease allowing wells of The Texas Company to drain the lease, and charging the Humble with seeking to prevent development of the field.

Major companies meeting in The Texas Company offices in Houston agreed to a proration plan with maximum daily production of the field to be held to 15,000 bbls. and with 20 acres as the unit prorated 50 per cent as to acreage and 50 per cent as to potential. Grayburg Oil Co. is short of crude oil. Its refinery has developed an ogre's appetite for crude oil due to the company's extended market of its Kilnok gasoline. On top of this the company has plans all approved for a bigger refinery to be built south of the city of San Antonio. John W. Choate, general manager of the company refused to attend the committee meeting in Houston on the ground that his company did not own production or acreage in the field, though admittedly interested in the field due to its contract with L. C. Turman of Fort Worth. Answering the arguments for conservation and delayed development of the field on account of overproduction it is said he offered to buy crude from the major companies but was refused. Turman, it is understood, takes the position that he has a market for his oil, will build his own pipe line and that deferred development of his lease will in no way serve conservation. Turman is offset northeast and southwest in the line of the trend of the field by independents with the Trinity Drillers and Clements well along on the first of their tests. He is offset northwest by The Texas Company and United North & South Development Co., and southeast by the Magnolia.

Claim Failure to Drill

Thus the matter of conservation and proration in Southwest Texas and the Darst Field stood at the close of the week. The suit against the Humble came up in Seguin, county seat of Guadalupe County on last Thursday and the outcome is not yet decided. It is based on the claims that the Humble owning a lease adjoining the Dallas Wilson lease on which The Texas Company brought in its discovery well, failed to drill offsets and permitted The Texas Company to produce from two wells for a period of 90 days without starting any offsets or protecting the lease.

Magnolia Petroleum Co.'s No. 1 Rand Miller was brought in Monday of last week at total depth of 2,612 feet and was first estimated at 400 bbls. for the initial flow. It later developed that the Edwards is a little tight there and gas was not in abundance and the well was estimated as a 250-bbl. well. It was deepened to 2,621 feet and will be put on the pump. It got the chalk fairly high at 2,197 feet and is about 2½ miles from the discovery well of the field on the southwest and the same company's No. 1 R. C. Appling, the nearest producer on the northeast. During the week North & South's No. 1 Thomas Dix approximately a quarter mile northwest of the Magnolia's No. 1 Rand Miller topped the chalk at 2,160 feet with an elevation of 492 feet, compared to 2,197 feet top of chalk in the No. 1 Rand Miller with an elevation of 517 feet. The situation is as follows:

	Elevation	Top chalk	Sub-sea top chalk
Magnolia's No. 1 Rand Miller	517	2,197	—1,680
North & South's No. 1 Dix	492	2,160	—1,668
Difference			12

A study of the map in this connection gives the idea that the field will be somewhat wide at that point. Magnolia Petroleum Co. the past week made locations for its No. 1 Thomas Dix to offset its own No. 1 Rand Miller and for No. 2 Thomas Dix to offset the North & South's No. 1 Thomas Dix. Also Magnolia made location for the No. 1 Klein offsetting its No. 1 Rand Miller on the southwest. Gulf Production Co. made location for its No. 1 Thomas Dix a southwest offset to the North & South's No. 1 Thomas Dix and the North & South made location for its No. 2 Thomas Dix 300 feet northeast of its No. 1 Thomas Dix.

Trinity Drillers and Clements' No. 1 Rand Miller, located nearly a mile northeast of the Magnolia's No. 1 Rand Miller has topped the chalk at 2,200 feet. Elevation figures are lacking but at any rate the chalk is plenty high and it is difficult to see what can prevent its being a producer. L. C. Turman has started an offset 300 feet to the northeast of it and is moving in rigs and equipment to drill more than one test at a time.

Mundine Investment Co., Inc.'s No. 1 L. V. Echols, located 1,500 feet southeast of the Magnolia Petroleum Co.'s No. 1 R. C. Appling, is down about 2,500 feet and in the chalk topped at 2,350 feet with an elevation of 459 feet. A low chalk as compared with the two wells mentioned above, the sub-sea being 1,891 feet, but the Magnolia Petroleum Co.'s No. 1 R. C. Appling got the chalk at around 2,500 feet and is producing there. Mundine Investment Co. is working with drill stem tests seeking to get a commercial well in the Austin chalk. O. W. Killam's No. 1 C. N. Adams, located 3,500 feet northwest of the Magnolia's No. 1 Appling, late in the week was drilling at 2,310 feet and in shale.

During the week some additional excitement was stirred up when the Grayburg Oil Co.'s No. 1 Wells located several miles south and a little east of the Darst Creek discovery well had a considerable showing of oil at 3,740 feet in the Buda lime. It topped the Austin chalk at 3,945 feet with an elevation of 505 feet. A drill stem test was attempted but failed to get a seat and has been coring in broken lime formation with last reported depth as 3,774 feet.

Pagenkopf & Kennon's No. 1 Halm, located 5 miles east of Seguin and 5 miles northwest of the Darst Creek discovery well, reported last week with a rather high chalk at 1,622 feet and a showing of oil, set casing to make a test of the chalk with total depth 1,630 feet and elevation 496 feet. It is up the dip from the Darst Creek Field accounting for much higher chalk as the Grayburg well is down the dip accounting for much greater depth.

Balcones Fault Zone

Features of interest in the Balcones Fault zone during the past week included the E. G. Potter's (Allan Park) No. 1 Watson, 10 miles south of San Antonio in Bexar County which early in the week bailed 8 bbls. of 43.6 gravity crude bailing from the top. The oil came mainly from the Austin chalk though the total depth of the test at 2,509 feet carried it several feet into the Edwards and it was thought to be making a little oil from the Edwards. Bailing is continuing and there is a chance that something will develop of interest.

In the western point of Lee County, D. H. Byrd's No. 1 Bostic, in the William Johnson Survey, with the Atlantic Oil Producing Co. owning a half interest in the deal, was in the Midway at 1,910 feet and not very far in. A core disclosed that it was the Midway. It looks as though it might be 300 feet high. The test is located in line with the play that is extending all down through the east half of Bastrop County and the Joe Bruner and Darst Creek Fields and hence is given considerable attention.

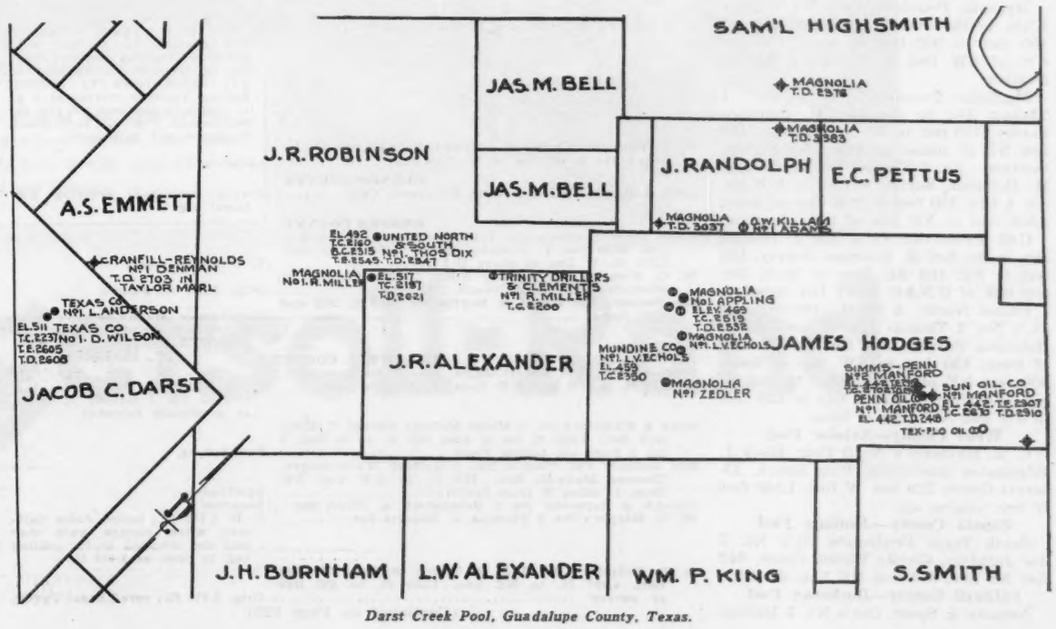
Production

Daily average production during the past week follows:

Branyon	23
Bruner	33,478
Dale	475
Darst Creek	1,429
Kingsville	359
Larremore	143
Luling	10,144
Lytton Springs	879
McMullen County	30
Medina County	24
Mirando	9,976
Somerset	1,773
Yoast	1,180
Total	59,907
Week ending November 16	61,505
Decrease	1,598

Laredo District

The Texas Company's No. 4-A V. C. Guerra in Starr County 4½ miles northwest of Roma, last week tested 16 trebles of oil and mud at 3,590 feet with a sand at 3,560-66 feet. It has set casing at 3,560 feet and is waiting on the cement. This is a rank wildcat except that in the drilling The Texas Company has been doing in the last two or three years in that territory it has got shallow gas in considerable volume at a few hundred feet depth. Southern Exploration Co. leased many thousands of acres from the Rio Grande at Roma extending north and sold a half interest in the deal to The Texas Company which has been doing the drilling and exploration work. A few years ago there was a big movement toward Starr County and much leasing and some drilling but without any very tangible results. The Texas Company's


SAM'L HIGHSMITH
JAS.M. BELL
MAGNOLIA T.D. 2516
MAGNOLIA T.D. 3383
J.R. ROBINSON
JAS.M.BELL
J. RANDOLPH
E.C. PETTUS
A.S. EMMETT
MAGNOLIA T.D. 3037
O.W. KILLAM No1 C.N. ADAMS
EL 492 UNITED NORTH & SOUTH T.C. 2180 B.C. 2515 No1 THOS DIX T.D. 2547
CRANFILL-REYNOLDS No1 DENMAN T.D. 2703 IN TAYLOR MARL
MAGNOLIA No1 R. MILLER
EL. 517 T.C. 2187 T.D. 2621
TRINITY DRILLERS & CLEMENTS No1 R. MILLER T.C. 2200
MAGNOLIA No1 APPLING ELEV. 469 T.C. 2519 T.D. 2532
TEXAS CO No1 L. ANDERSON
EL. 511 TEXAS CO T.C. 2237 No1 I. D. WILSON T.D. 2605 T.D. 2608
MAGNOLIA No1 L.V. ECHOLS
JAMES HODGES
J.R. ALEXANDER
MUNDINE CO No1 L.V. ECHOLS EL. 459 T.C. 2350
MAGNOLIA No1 ZEDLER
SIMMS-PENN No2 MANFORD T.C. 2702 SUN OIL CO No1 MANFORD EL. 442 T.C. 2907 T.D. 2910
PENN OIL CO No1 MANFORD EL. 442 T.C. 2610 T.D. 2748
TEX-PLO OIL CO
JACOB C. DARST
J.H. BURNHAM
L.W. ALEXANDER
WM. P. KING
S.SMITH

Darst Creek Pool, Guadalupe County, Texas.

No. 4-A Guerra is really promising and the nearest production is the shallow oil at Charco Redondo, 25 miles north, and the Mirando Field 50 miles north.

There were three completions in the Laredo district the past week in the triangle around Bruni. J. G. Mackay completed his No. 2 Dinn a little north of the Cole gas field in Duval County for 30,000,000 feet of gas at 1,762 feet; O. W. Killam completed his No. 14 Bruni a little south of the station of Bruni and got 20,000,000 feet of gas at 2,327 feet, and Houston Oil Co. completed its No. H-1 Benavides north of the Mag-Cole Pool in Webb County at 2,291 feet and got 25,000,000 feet of gas.

O. W. Killam's No. 14 Bruni is perhaps the most important of the completions since it is in a territory where operators have completed only a few wells. Enough has been done in that area to convince them there is a pool and the No. 14 Bruni offers big hopes and is helping to mark the confines of the pool.

Lasater Pool

In Brooks County in the Lasater Pool, which as yet consists of only the discovery well of the Houston Oil Co., the Houston Oil Co.'s No. 1 Wormser-Holbein is down around 2,000 feet and with as much more hole to make before reaching the depth of the pay in the discovery well at 4,115 feet. It will be three weeks or more before anything can be expected from that territory.

A feature of interest and importance in the lower county is the action of the Mexican Sinclair taking a block of 22,000 acres in Hidalgo County with the understanding that it will be drilled. This tract was taken after following a structure from the Mexico side of the border into this country, and is the first entrance into this country of the Sinclair's Mexican subsidiary.

Pettus Gas Pool

The situation has not changed in some time in the Pettus area in Bee and Goliad Counties. Mission Drilling Co. has not started any new tests since abandoning its No. 4 Ray and after plugging back the No. 3 Ray to 4,100 feet where it showed 5,000,000 feet of gas and some oil when first drilled, has not been able to shut out the salt water thus far. F. P. Zoch's No. 1 Kauffman a short distance to the east is now down below 3,200 feet and drilling.

Agua Dulce Field

Agua Dulce Oil & Gas Co.'s No. 1 Ollie Purl is down 2,050 feet and in sand. It is in the Agua Dulce Field in Nueces County. It is an offset to two gas producers and will probably be a producer as it has the sand at the same depth as the producers.

NEW LOCATIONS

Guadalupe County—Darst Creek

Magnolia Petroleum Co.'s No. 1 Peter Klein in the Joel R. Robinson Survey, 150 feet to NE line of lease, 150 feet SW of SW line of Alexander Survey, location.

Magnolia Petroleum Co.'s No. 1 Thomas Dix in the Joel R. Robinson Survey, 150 feet to SE line of lease, 150 feet NE of corner of Alexander Survey, location. No. 2 Thomas Dix in the Joel R. Robinson Survey, offset to U.N.&S. No. 1 Dix, 150 feet to NW line of lease, 1,000 feet to NE line of lease, location.

Gulf Production Co.'s No. 1 Thomas Dix in the Joel R. Robinson Survey, 150 feet to NE and SE lines of lease, 300 feet SW of U.N.&S. No. 1 Dix, location.

United North & South Development Co.'s No. 2 Thomas Dix in the Joel R. Robinson Survey, 150 feet to SE line of lease, 450 feet to SW line of lease, 300 feet NE of No. 1 Dix. Moving in rig. Location of No. 1 Dix is 150 feet to SW and NW lines of lease.

Webb County—Aviator Pool

C. E. Mayberry's No. 9 Puig, Block 1, Edgingston Subdivision Puig Ranch, Albercas Grant, 729 feet W line, 1,100 feet N line, rigging up.

Zapata County—Jennings Pool

South Texas Production Co.'s No. 7 Joe Jennings, Cerrito Blanco Grant, 640 feet SE line, 660 feet NE line, derrick.

Caldwell County—Buchanan Pool

Neuman & Speer, Inc.'s No. 1 McConnell in the William Spillers Survey, 900 feet SW of The Texas Company's No. 1 Cude; total depth 1,945 feet; milling out tools and fishing; had about a 4-bbl. well with 20 feet of serpentine.

Caldwell County—Bruner Field

Humble Oil & Refining Co.'s No. 5-A M. Briscoe in the J. Hinds Survey, 206 feet to N line, 485 feet to W line, drilling in lime at 2,477 feet; No. 9 C. F. Dye in the Hinds Survey, 300 feet E of No. 1 Dye, drilling in shale at 500 feet; No. 9-C Floy Gray in the J. Hinds Survey, 150 feet to N line, 350 feet to E line, drilling in shale at 500 feet.

Humble & Luling's No. 7-A Johnson in the J. Hinds Survey, 593 feet S line, 650 feet W line, drilling in shale at 400 feet.

Guadalupe County—Darst Creek

Gulf Production Co.'s No. 1 C. Anderson in the J. C. Darst Survey, 150 feet to S and E lines, location; No. 1 Tadlock in the Jacob C. Darst Survey, 150 feet NW cor., location.

O. W. Killam's No. 1 C. N. Adams in the Josias Randolph Survey, 150 feet to NW and NE lines of farm; total depth 2,247 feet, drilling in Taylor marl.

Magnolia Petroleum Co.'s No. 1 L. V. Echols in the James Hodges Survey, 150 feet to NW and SW lines of farm, 3,650 feet to SW, 3,220 feet to NW of survey, location; No. 2 L. V. Echols in the James Hodges Survey, 150 feet to SW and SE lines of lease, derrick up; No. 1 Rand Miller in the Jerome B. Alexander Survey, 150 feet to NW and SW lines, total depth 2,621 feet, will be put on pump; No. 1 C. Zedler in the James Hodges three-fourths league, 150 feet NW and NE lines of 100-acre tract, one-half mile S from Magnolia No. 1 Appling, correction, derrick.

Mundine Investment Co.'s No. 1 L. V. Echols in the James Hodges Survey in 11-acre tract out of south point of L. V. Echols tract, 150 feet to NW and SW lines of tract, 3,650 feet to SW, 4,200 feet to NW lines of survey, total depth 2,532 feet, in Austin chalk, making drill stem test.

The Texas Company's No. 2 Dallas Wilson in the J. C. Darst Survey, 150 feet to S and W lines, derrick; No. 2 L. Anderson in the Jacob Darst Survey, 150 feet to N and E lines, shut down at 685 feet; No. 3 L. Anderson in the Jacob Darst Survey, 150 feet to N and W lines, location corrected; No. 4 Lemmie Anderson in the J. C. Darst Survey, 150 feet to N and W lines of farm, derrick.

Trinity Drillers-Clement's No. 1 Rand Miller in the Jerome B. Alexander Survey, 150 feet to NW and NE lines of 25.5-acre tract, total depth 2,153 feet, in basal Taylor.

United North & South Development Co.'s No. 1 Thomas Dix in the Joel R. Robinson Survey, 150 feet to SE and SW lines of lease, total depth 2,547 feet, showing oil in Edwards lime, setting casing, waiting on cement.

Medina County—Adams Gas Field

Jake Jarman's No. 1 J. P. Nixon in the A.B.&M. No. 63 Survey, 1,400 feet to N line, 1,300 feet to E line, in SW end of Adams Gas Field, location.

Live Oak County—Cartwright Pool

Houston Oil Co.'s No. 2 J. B. Dunning in the M. B. Kilvin Survey, 1,445 feet north of No. 1, total depth 2,088 feet, bailed salt water, pulling screen.

Brooks County—Lasater Pool

Houston Oil Co.'s No. 1 Holbein-Wormser in the Palo Blanco de Maguellas Survey, 330 feet N line, 6,540 feet E line, direct offset 660 feet S of No. 1 Lasater, total depth 1,820 feet, drilling in broken lime and streaks of gumbo and gravel.

Kleberg County—Kingsville Pool

Humble Oil & Refining Co.'s No. 8 R. J. Kleberg in Lot 7, Section 40, K.T.&I. Survey, 150 feet S and E lines of lot, total depth 2,885 feet, tested salt water.

Nueces County—Agua Dulce Field

Agua Dulce Oil & Gas Co. and Houston Gulf Gas Co.'s No. 1 Ollie Purl, 450 feet from S and W lines of N half Section 6, Ross Peters Subdivision, total depth 2,025 feet, coring sand.

San Patricio County—White Point

Spencer & Rhodes' No. 2 Texas Company Fee, Lot 6, Roos Subdivision, 150 feet to S and W lines of W 50 acres, derrick partly built, standing.

Victoria County—Nursery

Humble Oil & Refining Co.'s No. 3-A Jay J. Welder in the D.L.&C. Survey, 1,634 feet SE lines, 736 feet SW lines, 1½ miles NE from Nursery, drilling in shale at 5,865 feet.

Duval County—Cole

Allied Gas Co. (Shell's) No. 1 Dinn, Survey 143, 660 feet S line, 660 feet E line, total depth 38 feet, spudded in, set 10-inch casing at 38 feet.

Allied Gas Co.'s (Shell) No. 2 Dinn, Survey 665, 300 feet N line, 300 feet E line, derrick (location corrected).

J. G. Mackay's No. 2 Dinn, Block 1, Survey 454, 450 feet N line, 160 feet E line, total depth 1,756-62 feet, sand at 1,756-62 feet, set 6⅝-inch casing at 1,756 feet, waiting on cement.

Simms Oil Co.'s No. 5 Dinn, Survey 62, 1,320 feet S line, 660 feet E line, total depth 1,778 feet, set 6⅝-inch casing at 1,739 feet, sand at 1,748-78 feet, 35,000,000 feet gas, 450 pounds rock pressure; No. 6 Dinn, total depth 1,779 feet, set 6⅝-inch casing at 1,741 feet, sand at 1,760-79 feet, 25,000,000 feet gas 450 pounds rock pressure; No. 7 Dinn Survey 454, 660 feet W line, 660 feet N line of SW NW, derrick.

Duval County—Humble Pool

Humble Oil & Refining Co.'s No. 35 Kohler, Survey 165, 330 feet S and E lines, total depth 1,799 feet, 25,000,000 feet gas.

Duval County—Kohler Pool

Humble Oil & Refining Co.'s No. 37 Kohler, Survey 144, 330 feet N line, 495 feet E line, total depth 1,661 feet, drilling; No. 1 Peters, Survey 398, 1,495 feet N line, 1,495 feet W line, rigging up.

E. H. Buckner's No. 1 Peters, Survey 162, 495 feet S and W lines, total depth 1,795 feet, depth corrected, 25,000,000 feet gas.

Duval County—Schoolfield O'Byrne

Magnolia Petroleum Co.'s No. 10 Hahl, Block 25, Survey 250, 30 feet E line, 150 feet S line, total depth 2,291-2,321 feet, sand, set 8⅛-inch casing at 2,291 feet; No. 2 Lundell, Survey 60, 150 feet N and E lines of SE of Survey, total depth 2,331 feet, 50 bbls.

Onyx Petroleum Co.'s No. 5 Krauter, Block 20, Survey 250, 150 feet S and E lines of block, location.

G. M. Partee's No. 6 Moody, Survey 60, 510 feet N line, 150 feet W line, total depth 2,357 feet, set 6⅝-inch casing at 2,347 feet, sand at 2,350-57 feet, estimated 75 bbls.

Simpson Fell Oil Co.'s No. 7 Moody, Survey 60, 2,148 feet N line, 150 feet W line, drilling at 300 feet.

Trapshooter Reilly's (Shell) No. 2 Hahl, Block 27, Survey 250, 1,050 feet E line, 150 feet N line, total depth 2,330 feet, flowed and pumped 100 bbls.

Trapshooter Reilly Oil & Royalty Co.'s No. 3 Hahl, Block 26, Survey 250, 30 feet E line, 150 feet N line, drilling at 1,100 feet.

Jim Hogg—Henne-Winch-Fariss Pool

George S. Marshall's No. 4 Holbein, Block 10, Survey 11, Share 3, 150 feet south and west lines, derrick up; No. 5 Holbein, Block 10, Survey 15, Share 3, 150 feet north and west lines, rigging up.

W. R. Shankle's No. 3 Holbein, Block 22, Clarkson & Carscaden Subdivision (Hogg Ridge), Share 3, Las Animas

(Continued on Page 110)

WILDCAT OPERATIONS IN SOUTHWEST TEXAS

Week ended November 23

BASTROP COUNTY

T. C. Hadley's No. 1 F. Kiel, R. H. Grimes Sur., 150 ft. E line, 1 000 ft. S line ..... Drlg. 3,735 ft.

R. L. Batts et al's No. 1 A. L. Alexander, W. M. Eastland Sur., 1,350 ft. from W line, 750 ft. from S line ..... Drlg. 215 ft.

Owens et al's No. 1 Goodman ..... Top Buda; shut down 2,540 ft.

BEE COUNTY

Houston Oil Co.'s No. 1 McKinney, L. C. Randolph Sur. ..... Drlg. 2,760 ft. in gumbo.

The Texas Company's No. 1 Tipps, C. Clark Sur., 150 ft. from S and W lines of Blk. 45 ..... T. D. 730 ft.; drlg. in gumbo.

Nichols et al's No. 2 Hicks in Jose Maria Urango Survey, 600 feet to N. line, 2,000 feet to W. line ..... T. D. 2,000 ft.; trying to sidetrack packer and line set at 1,190 ft.

BEXAR COUNTY

Guy G. Fisher's No. 1 S. L. Beck, P. W. Hays Sur. ..... T. D. 1,002 ft.; shut down.

F. H. Eckert's No. 1 Sandemer, Sur. 52 ..... Drlg. 615 ft.

Penn-Tex Oil Co.'s No. 1 Kate May, F. R Desauge Sur. No. 134 ..... Drlg. in chalk at 1,695 ft.

Ross E. Fenton Co.'s No. 1 Clarence B. Uhl, 150 ft. to S and W lines, 6 miles SE from San Antonio ..... Location.; drlg. water well.

Moore-Jauer's No. 1 Holly R. Ellison ..... Drlg. in hard gray lime at 1,790 ft.; has strong odor of gas and shows trace of asphalt.

Leon Oil Co.'s No. 1 Reiniger, 300 ft. E line, 215 ft. S line ..... T. D. 1,670 ft.; setting casing in top of Edwards lime.

E. G. Potter's No. 1 Watson, B. Martinez Sur. ..... T. D. 2,509 ft.; bailed 8 bbls. of 43.6 gravity oil testing 55% gasoline, running bailer from top on Monday, on Tuesday it was bailed down to bottom. Bailing Tuesday started at 3 p. m. and is to continue till 3 p. m. Wednesday. Test will then stand 24 hours and bail again.

W. C. Sutherland's No. 1 J. Halberdier. Survey 57, located 150 E of Cen of W. line ..... Location.

BLANCO COUNTY

Ashe & Marshall's No. 1, 5 mi. S Johnson City ..... Survey corrected; erecting National rig.

BROOKS COUNTY

Amos Dinn, Trustee's No. 3 Garcia-Ramosi, share B-1, Las Mestenas y Gonzales grant, 1300 ft. S line, 2,325 ft. W line of share B-1 ..... T. D. 800 ft.; drlg.

W. C. French's No. 8 Riley Allen, C Blk. 37, Nesslip Subdivision of Allen Ranch, NE part ..... Drlg. 1,500 ft. gumbo.

Joe Bruner's No. 1 Neil, S. Morris Sur., 400 ft. NE and NW lines ..... Location in Magnolia tank farm at Luling; delayed by suit to compel Magnolia to move tank.

CALDWELL COUNTY

Stone et al's No. 1 Robert Guinn, Joseph Burleson Sur., 150 ft. to NE and NW lines of 225-acre farm ..... T. D. 1,711 ft.; shut down; this test is No. 2 instead of No. 1 as previously reported.

Keen & Malcolm's No. 1 Mollie McNeal, George C. Kimball Sur., 2,500 ft. to W line, 860 ft. to N line, 1 mi. S from old Luling Field ..... Spudded in.

San Antonio Pet. Corp.'s No. 1 Gustool Walkerhagen, Thomas Maxwell Sur., 150 ft. to NW and SW lines, 1¼ miles W from Lockhart ..... Spudded in.

Cranfill & Reynolds' No. 1 Berensdorf, A. Floyd Sur. .. Location

W. H. Harper's No. 3 Thomas, J. Roberts Sur. ..... T. D. 1,742 ft.; bailed down halfway when clamps gave way and csg. dropped 80 ft.; pulling csg. to reset at 1,468 ft.

G. R. McIntire's No. 1 J. B. Towns in Isaac Weldon Sur., 4,900 ft. to NE line, 1,350 ft. to SE line of survey ..... Drlg. 2,678 ft.; cored basal Taylor.

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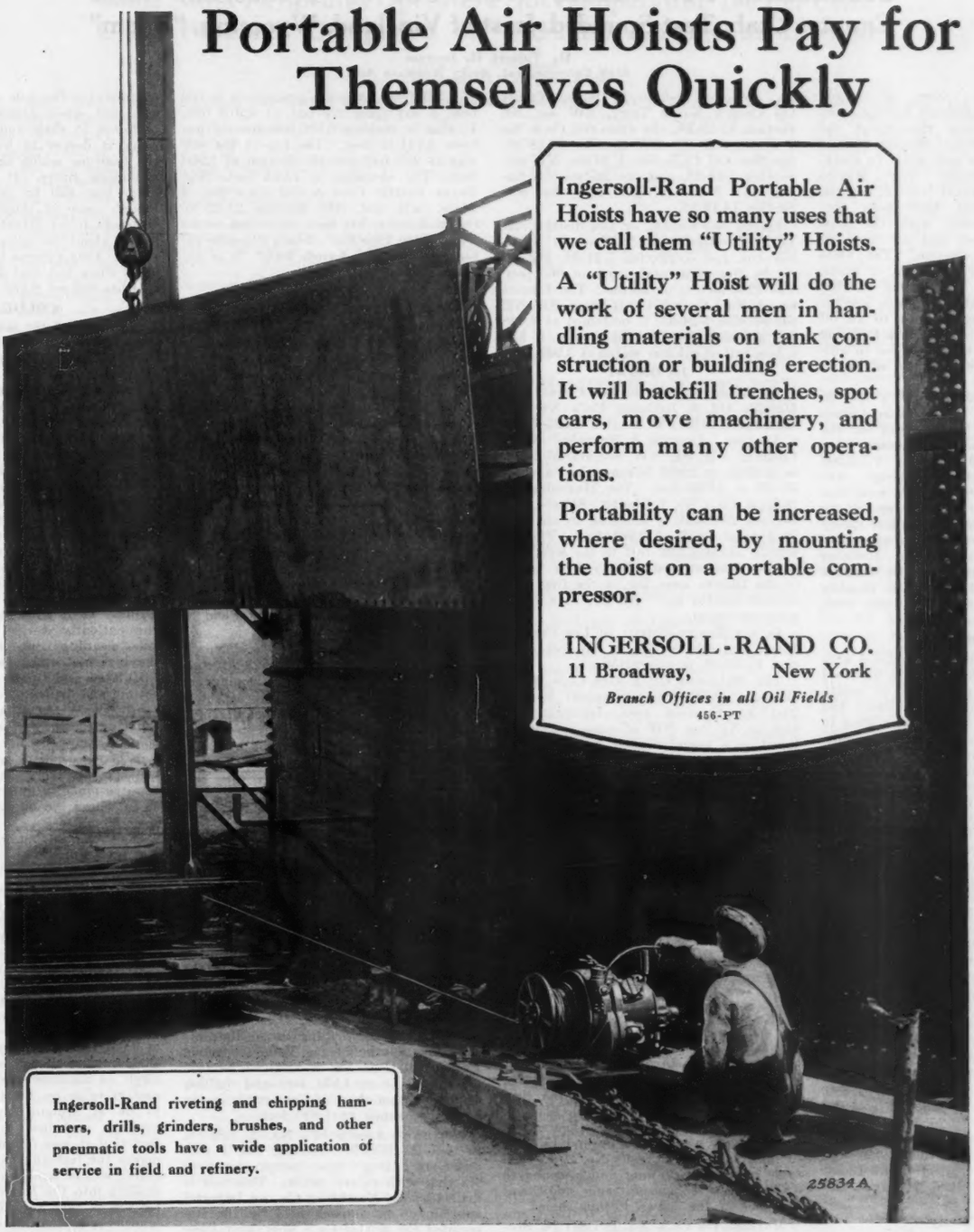

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Frannie Dome Well Increases Output

Southeastern New Mexico Wells Put on Production. Kane County, Utah, Test Spudded. Last of Vineland, Wyoming, "Boom"

By Tolbert R. Ingram
Staff Correspondent, Rocky Mountain Area

DENVER, Colo., Nov. 25.—Cold weather and snow hindered drilling operations throughout the Rocky Mountain area the past week. In southeastern New Mexico several recent completions have been connected with the pipe lines and are now on production. The Ohio Oil Co.'s No. 1 State, in the Hobbs district, which ran into sulphur water, is being plugged back to an oil showing, and the Humble Oil & Refining Co.'s No. 1 Bowers has succeeded in killing the flow of 50,000,000 feet of gas to drill deeper.

The Utah Oil Refining Co.'s test in Kane County, Utah, where the co-operating interests hold 15,000 acres on the structure, has commenced spudding.

The final chapter in the Vineland boom in Pueblo County, Colorado, was written when the "discovery" well was abandoned without finding any oil to warrant the excitement caused last spring when 15 to 25 operations were started.

In Wyoming the Midwest Refining Co.'s No. 1 Rosenberg on the Frannie Dome has increased its output steadily since completion and one day this week put 548 bbls. into the tank.

NEW MEXICO

Rain, sleet and bad roads, coupled with an open season for deer hunting, hindered drilling operations this week in southeastern New Mexico. One incident had an interesting turn as well as adding to the temporary discomfort of many people. The Pecos Valley Gas Co., which serves Artesia, Roswell and some other towns with natural gas, had made a connection with the Maljamar Oil & Gas Co.'s new gas well in the Maljamar district and turned the gas into the lines. When this gas reached the towns it was found the pressure had been considerably lowered, due, it was said, to air in the gas. On top of this difficulty a break occurred in the line to Roswell. The well was disconnected and the pipes blown and a connection made with the Texas Production Co.'s Robinson well.

The Lockhart Oil Co.'s No. 1 McAllister, C NW Section 23-26-30, near the southern end of Eddy County, is bottomed at 3,820 feet in a white water sand and shut down for orders. It is making about 2 bailers of salt water per hour and has 2,000 feet of it standing in the hole. F. B. Van Horn's No. 1 Santa Fe, 440 feet from the south line and 880 feet from the east line, Section 18-19-26, is moving in. Flynn, Welch & Yates' No. 57 State, 330 feet from the east line and 2,340 feet from the south line, Section 19-19-28, south of the Artesia Pool, is rigged and ready to spud.

Lea County

In the Hobbs area in Lea County the Ohio Oil Co.'s No. 1 State, NE SE SW Section 9-19-38, a mile west and south of the nearest producers, is shut down at 4,312 feet in lime with 4,100 feet of sulphur water and 150 feet of oil standing in the hole. The Humble Oil & Refining Co.'s No. 1 Bowers, C NE SE Section 30-18-38, 3 miles northwest of the nearest producer, has succeeded in mudding off the flow of 50,000,000 feet of gas at a total depth of 3,687 feet and is preparing to resume drilling. Harrison and others' No. 1 Tatum, NW SW SW Section 35-18-38, is digging cellar. None of the recent locations announced in this area have yet commenced spudding. These include the Prairie Oil & Gas Co.'s No. 1 Delmon, NW SW SE Section 15-19-38; the Shell Petroleum Co.'s No. 1 McKinley, SW cor. Section 19-18-38; Walker Oil Corp.'s No. 2 Terry, SW cor. SE Section 10-19-38; the Ohio Oil Co.'s No. 1 State, NE cor. SW Section 30-18-38; the Sun Oil Co.'s No. 1 State, NE cor. Section 5-19-38, and the Midwest Refining Co.'s No. 6 Wright, NW cor. SW Section 14-19-38.

In the San Simion, or Lea district, the Texas Production Co.'s No. 1-B State, SW cor. Lot 5, Section 1-21-33, lost its rig by fire at a total depth of 965 feet. The 12½-inch is on bottom. The Empire Gas & Fuel Co.'s No. 3-B State, SW NE SE Section 5-21-35, is bottomed at 4,048 feet and shut down for rig repairs. It had a hole full of sulphur water at 3,935 feet.

Jal District

In the Jal district in Lea County, the Humble Oil & Refining Co.'s No. 3-A Lindley, C NW SW Section 13-25-36, is a location. Cranfill & Reynolds' No. 1 Cushing, SW SE NW Section 23-24-36, is drilling at 2,995 feet and had a show of oil at 2,840 feet. The Magnolia Petroleum Co.'s No. 1 Lindley, SE cor. NE Section 26-25-36, is plugging to abandon at a total depth of 2,961 feet. The rig will be skidded 100 feet to the west and a new hole started. Forty-three joints of the 10-inch were lost in the first hole several months ago. All but nine joints were recovered.

In the Eunice district in Lea County, Hazel and others' No. 1, SW cor. Section 12-20-36, is a location.

The Maljamar Oil & Gas Co.'s No. 2 Baish, C NW NE (corrected) Section 21-17-32, Caprock area, formerly carried as NE cor. SW of same section, is listed as a completion at a total depth of 4,121 feet. Average production is 160 bbls. a day from the pay at 4,010 feet. It also is making 6,000,000 feet of gas from 3,741-45 feet. The top of the salt was at 992 feet and the bottom at 1,960 feet. The elevation is 4,035 feet. The Texas Pacific Coal & Oil Co.'s No. 2 State, NW cor. SW Section 21-23-36, Ochoa district, has been connected to the Texas Pipe Line Co.'s 3-inch 3½-mile extension from the Lynch well. It is averaging 240 bbls. a day.

UTAH

The Utah Oil Refining Co.'s test on the Paria, or Butler Valley Dome in Kane County, southern Utah, is getting under way after several months of preliminary work in the form of road building and moving in equipment and supplies. The well, No. 31 Pary, SW cor. SE Section 14-39s-1w, (unsurveyed) commenced spudding the past week. The Midwest Refining Co. is in charge of the operation. The elevation is 6,403 feet and the Pennsylvanian formations will be the objectives. The structure embraces approximately 15,000 acres held by the Utah Oil Refining Co., the Mountain States Oil Co., the Equity Oil Co., and others. The location is about 18 miles southeast of Cannonville, 50 miles southwest of the Circle Cliffs structure, and 25 miles east of the Virgin Field in Washington County.

The Utah Southern Oil Co.'s No. 1 King, SE NE SE Section 13-23-20, Salt Valley Dome, Grand County, is plugging to abandon at a total depth of 3,829 feet. Last August the string of 6¼-inch casing parted and efforts to fish out the lower part and then to sidetrack were unsuccessful. The hole cut thick beds of salt, but when drilling stopped it was bottomed in shale and the plans were to carry it deeper in hopes of picking up the horizons which show oil and gas at Boundary Butte. It is doubtful if another test will be drilled at this time, though some of those interested in the Colorado River structures are still optimistic about the oil possibilities of that region. They express the opinion that the oil is there but that drilling in the right spot has not yet taken place.

COLORADO

Memories of the incipient oil boom in the Vineland district southeast of Pueblo, Colo., which caused considerable excitement about 10 months ago, were revived with the abandoning of the Vineland Oil Co.'s No. 1 Shaw, SE NW NW Section 3-22-63. This was the "discovery" well reported last January to be standing with a hole half full of high grade oil at a total depth of 1,190 feet. Within a few months between 15 and 25 wells were drilling or had rigs up. All of the wells drilled deep enough encountered water. None found oil. The Continental Oil Co. drilled an offset to the "discovery" with the same results. The officials of the Vineland company, long after everybody else had stopped drilling, went back into the Shaw well and patiently worked for weeks on the hole, cleaning out the cavings, lathe shavings and other debris that had accumulated and finally this week reached bottom and drilled a few feet deeper. The results were the same as in the other wells and they decided to abandon the hole. It is generally believed the officials of the company were sincere in their belief a discovery had been made and were as much in doubt as everybody else as to where the oil bailed from the hole came from.

In Fremont County, Clem Lovisone's No. 1 Catlin, SW NE SW Section 5-19-70, in the Canon City district, was drilled to 2,160 feet and abandoned without encountering oil, gas or water.

In Pueblo County the Boone Oil & Gas Co.'s No. 1 Ritter, NW Section 33-18-60, near Tacony, is shut down at 3,050 feet.

In Huerfano County, the Parker Club, Inc.'s No. 1 Fee, Section 4-28-68, Badito-Alamo structure, joint with the Kinney-Coastal Oil Co., is drilling at 3,820 feet and carrying the 5⅞-inch. The horizon at 3,692 feet which produced considerable gas in this well has been identified definitely as the Greenhorn and with this marker to go by, the Dakota is estimated to lie at around 3,940 feet. The gas pressure continues to hold up and the fact that it was found in that formation makes the test unusually interesting. The casing will be landed and cemented before drilling into the Dakota. An interesting feature is that the hole has cut several igneous sills, but there were followed by shale. One of these was 300 feet thick. The presence of the sills did not result in any thickening of the beds above or below and the supposition is the beds into which the igneous rock intruded were compressed by the action.

In Las Animas County, the Helium Co.'s No. 1 Keith, NW cor. Section 4-29-60, Thatcher Dome, encountered water at 1,050-62 feet and is shut down for orders. The same company's No. 1 Hall, NW SE SW Section 19-27-59, Delhi Dome, is rigging up. The American Helium Gas & Oil Co. has been organized by La Junta and Rocky Ford citizens and has purchased a rig to drill near Thatcher. C. L. Woods, of Rocky Ford, is president.

In Boulder County, the Reliance Oil

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SOUTH TURNER VALLEY TEST ENCOUNTERS WET GAS FLOW

By Victor Lauriston
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, Nov. 23.—In the South Turner Valley, East Crest Oil Co.'s No. 1, LSD 5-6, Section 16-19-2w5, has encountered a wet gas flow estimated 2,000,000 feet a day, at around 4,327 feet or approximately 15 feet in the lime. Similar flows were encountered in the top of the lime by the Home Oil Co.'s producers. Commercial production is usually met around 175 feet in the lime. East Crest's No. 2, LSD 4, same section, is running 8-inch casing to 3,240 feet after encountering additional wet gas in the lower Fernie shales.

Mayland Oil Co.'s No. 1, LSD 10, Section 17-19-2w5, which has spent several weeks backing off drill, has recovered the bit and is resuming drilling into the lime at 5,764 feet. At this depth it is 323 feet in the lime. It is claimed the steep pitch of the structure makes it necessary to drill between 500 and 600 feet into the lime to secure production. Foothills Oil & Gas Co.'s No. 3 (South West Petroleum), LSD 16, Section 8-19-2w5, is drilling 141 feet in the lime at 3,619 feet depth. If conditions are normal, this test should get production within a few weeks; though, as the location is south of Mayland's No. 1 and the farthest south test to reach the lime, it is uncertain what may develop. If Foothills' No. 3 gets deep lime production, it will materially extend the proven area to the south.

Home Oil Co.'s No. 4, Section 20-19-2w5, is standing cemented at 5,427 feet and moving diamond drill to drill into the lime. Cable outfit from No. 4 will be moved to a new location in the same section for Home's No. 6.

In the Central Field, three Royalite Oil Co. tests are drilling in the lime.

In the South Turner Valley, Sterling Pacific Oil Co.'s No. 1, LSD 15, Section 33-18-2w5, is at 4,954 feet and drilling after getting a show of light crude in the Dalhousie sands at 4,800 feet.

Northwest-Associated's No. 2, LSD 6, Section 20-19-2w5, offsetting No. 1 producer, is mixing mud preparatory to starting with rotary outfit. This test is drilled by the Northwest Co., an Imperial subsidiary, on acreage held by the Associated Oil & Gas Co. Northwest-Associated's No. 1 got production in the lime at 5,410 feet, its October crude naphtha averaging 268 bbls. a day.

South Turner Valley

In the South Turner Valley, two independent tests are thought to be close to the lime. Homestead Oils' No. 1, LSD 5, Section 16-19-2w5, and Commonwealth Petroleums' No. 2, LSD 7, Section 9-19-2w5.

Calmont Oils' No. 8, LSD 11, Section 20-19-2w5, is rigging up with cable tools. Calmont's No. 10 has derrick up and No. 11 has cellar dug.

Mercury Oils' No. 1, LSD 13, Section 4-19-2w5,, No. 2, LSD 12, and No. 3, LSD 2, have encountered shows of wet gas and light crude in the Fernie shales.

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New Wells Boost California Output

Some Santa Fe Springs Operators Not Co-operating 100 Per Cent. Good Producer Completed on Tideland Acreage at Elwood

By L. P. Stockman
Staff Correspondent, California Fields

LOS ANGELES, Calif., Nov. 23.—State production reflecting the completion of several large flowing wells at Santa Fe Springs and additional completions at Elwood, Ventura Avenue, Midway-Sunset and other less prolific fields, showed a fairly substantial increase this week. During the past seven-day period 24,335 bbls. per day of new production were added at Santa Fe Springs, 3,950 bbls. at Elwood, 5,870 bbls. at Ventura Avenue and 2,270 bbls. at Midway-Sunset and a check indicates the probable completion of additional new wells in each area. Several operators at Santa Fe Springs kicked over the traces this week and, while no warning has yet been issued, something is going to happen if this situation continues. This small minority who are jeopardizing the curtailment agreement are playing with dynamite and the lid may blow off unless they meet their moral obligations. It might not be amiss to mention the fact that if this group voids the present plan to regulate production it will precipitate another slash in the posted price of crude oil and it will be far more drastic than the last one, which brought the price down to 60 cents a barrel. And the large buyers of crude don't mean maybe either.

Production of crude oil in California totaled 26,895,160 bbls. during October. This is a daily average of 867,586 bbls. and represents a decrease of 12,556 bbls. Current production is considerably less than the daily average for the past several months due to crude oil curtailment in flush fields and will probably average somewhere around 700,000 bbls. a day for November. Stocks of crude and refined oils showed a substantial increase during October, 4,659,722 bbls. being added to storage in the period in question. Heavy crude and fuel oil gained 1,589,669 bbls., while 2,017,156 bbls. of light refining crude were put into storage. The accumulation in gasoline and naphtha stocks aggregated 961,250 bbls. and 219,087 bbls. respectively. Other refined oils declined 127,440 bbls. At the close of October there were 112,402,472 bbls. of heavy crude and fuel oil in storage, 42,728,740 bbls. of light refining crude, 16,184,992 bbls. of gasoline, 3,506,174 bbls. of tops and 10,022,166 bbls. of other refined products, bringing the total amount of fluid stocks to 184,844,544 bbls.

Void Action at Ventura

The district board of oil and gas commissioners for the Ventura district temporarily voided efforts of R. D. Bush, state oil and gas supervisor, to eliminate gas waste at Ventura Avenue by setting aside an order of the supervisor establishing a gas oil ratio and limiting the waste of natural gas to 5,000 feet a day for each well. It is the present intention of the department of natural resources to petition the Superior Court of Ventura County to arbitrarily establish a gas oil ratio in an effort to secure action. This hearing will probably require two weeks due to the mass of technical data which will be submitted for assimilation by the court before any decision can be rendered. The temporary order issued by the district commissioners is as follows: (

That an unreasonable waste of natural gas is in existence in the Ventura oil field and an unreasonable waste of natural gas is threatened to be continued indefinitely in the Ventura oil field. (2) It is ordered and directed that such unreasonable waste of natural gas should be discontinued and refrained from. (3) That for the most efficient and economical operation of the Ventura oil field a working surplus to cover the difference between high and low peak demands of maximum available gas outlets during any day or week or month, and a measuring tolerance which includes all line leakage between wells and traps shall not be considered unreasonable waste, providing this working surplus and measuring tolerance does not exceed 10 per cent of the total maximum available gas outlets of the Ventura oil field during any day or week or calendar month. (4) That the order issued by the state supervisor of oil and gas on October 3, 1929, is hereby set aside and is hereby superseded by the foregoing order. This decision of said board of commissioners of oil and gas district No. 2, shall forthwith be filed with the state oil and gas supervisor of the State of California and upon such filing shall be final, and become effective December 1, 1929."

Injunction proceedings filed by state officials to enjoin 131 Long Beach operators from further waste of natural gas has been postponed until December 6 by Superior Judge William Hazlett. This suit, alleging a daily waste of 100,000,000 feet of gas, was filed on November 9 by F. G. Stevenot, director of natural resources and is a companion suit to the action instituted against Santa Fe Springs operators some time ago. A writ of prohibition granted by the District Court of Appeals halted all proceedings in the Santa Fe Springs case as far as the Superior Court is concerned and this action has finally wound up in the State Superior Court, which convenes in Los Angeles on December 11, at which time a date will be set for the hearing. Because of the structural difference and present status of the various horizons the State asks the court to sanction a gas oil ratio of 500 feet of saturated gas for each barrel of crude produced in the upper zone at Long Beach and 1,000 feet of gas for the deeper zones. In the Santa Fe Springs' action the State fixed a gas oil ratio of 2,500 feet of natural gas for each barrel of oil produced.

Santa Fe Springs

Deep zone exploitation resulted in the completion of 12 wells at Santa Fe Springs this week and a flock more are being prepared for immediate tests. George F. Getty headed the list with four completions which showed an aggregate initial daily production of 7,755 bbls. The largest of this quartet was No. 33 Nordstrum, a new well which came in doing 3,210 bbls. of clean pipe line oil daily from the lower Clarke zone at 8,000 feet. No. 39, another new well, also showed substantial production as this project came in under a natural flow making 2,160 bbls. daily from 7,360 feet. No. 28 Nordstrum and No. 37 on the Hill lease, both former upper zone producers, were recompleted flowing 1,180 bbls. and 1,205 bbls. respectively. The former, which was originally finished doing 3,960 bbls. a day from the O'Connell zone at 6,470 feet, was redrilled and deepened to 7,378 feet, from which depth it blew in prematurely during the course of a water test on the 5-inch which had been landed at 7,371 feet. No. 37 Hill, which was recompleted this week at 7,700 feet, registered its first production last October when it came in flowing 1,960 bbls. initially from 7,553 feet. Getty is experiencing considerable difficulty beaning down No. 29 Nordstrum, which came in about 10 days ago flowing 7,870 bbls. per day from the 8,000-foot level, as it is making 41,000,000 feet of natural gas in addition to the crude oil. This is particularly unfortunate because Getty's allowable production under Umpire Grimm's latest order is 8,710 bbls. per day. The inability to reduce production of these large wells has forced Getty to shut down 11 small producers but he is still considerably in excess of the allowable quota due to the fact that he failed to curtail during the first curtailment period and must shut in an amount equal to the excess.

The Star Petroleum finished the largest well chalked up this week when its No. 4 Wardman blew in doing 5,350 bbls. of clean 34.5 gravity oil and 5,900,000 feet of wet gas daily from the lower Clarke at 8,024 feet, the hole having been finished with a 3½-inch liner carrying 716 feet of perforated. This well was a recompletion, having been originally completed doing 2,160 bbls. per day from 7,983 feet last October. The Commodore Oil Co., a subsidiary of the Wilshire, successfully finished two new wells, No. 4 Babbonett showing an initial of 3,460 bbls. daily from 7,985 feet and No. 5 Landle 1,640 bbls. from 7,980 feet. The Bandini Petroleum, another subsidiary of the Wilshire, completed No. 18 Off but this new well was only good for 630 bbls. per day from 7,820 feet. The Texas Com-

TANKER SHIPMENTS FROM LOS ANGELES TO ATLANTIC AND GULF COAST PORTS

Commodity—	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Crude oil	.....	.....	.....	.....	997,250	2,988,419
Fuel oil	.....	.....	11,650	1,664	468,825	143,471
Diesel and gas oil	73,250	10,464	63,279	9,040	2,501,241	1,745,589
Gasoline	489,576	69,939	317,020	45,289	18,822,753	12,865,988
Kerosene	.....	.....	.....	.....	49,750	.....
Naphtha distillate	.....	.....	.....	.....	81,750	339,100
Coastwise—						
Crude oil	434,000	62,000	74,080	12,011	23,984,084	21,813,200
Fuel oil	155,314	22,188	370,331	52,904	17,595,377	15,496,920
Diesel and gas oil	8,642	1,235	73,000	10,429	1,143,828	1,066,993
Gasoline	130,421	18,632	173,973	24,853	9,879,030	8,549,833
Kerosene	.....	.....	.....	.....	70,286	66,757
Naphtha distillate	.....	.....	.....	.....	.....	239,071
Exports—						
Crude oil	139,584	19,941	132,175	18,882	5,498,386	1,958,932
Fuel oil	265,428	37,918	694,341	99,192	16,816,680	20,359,158
Diesel and gas oil	70,362	10,052	6,367	910	2,433,578	2,033,938
Gasoline	36,573	5,225	396,768	56,681	10,954,651	6,770,813
Kerosene	78,470	11,210	92,744	13,249	2,983,259	3,787,533

TANKER SHIPMENTS FROM SAN FRANCISCO TO ATLANTIC AND GULF COAST PORTS

Diesel and gas oil	.....	.....	.....	.....	.....	418,188
Gasoline	78,057	11,151	.....	.....	2,209,240	2,000,060
Lubricants	.....	.....	.....	.....	138,706	277,151
Coastwise—						
Fuel oil	73,618	10,517	.....	.....	2,798,589	3,062,855
Diesel and gas oil	.....	.....	.....	.....	360,538	279,197
Gasoline	174,307	24,901	144,511	20,644	4,673,378	4,431,534
Kerosene	2,510	359	.....	.....	191,402	224,642
Exports—						
Crude oil	.....	.....	.....	.....	121,603	96,250
Fuel oil	.....	.....	.....	.....	841,631	2,113,314
Diesel and gas oil	.....	.....	66,475	9,496	393,132	56,180
Gasoline	.....	.....	14,736	2,105	4,985,677	4,012,706
Kerosene	.....	.....	.....	.....	528,060	625,977
Lubricants	.....	.....	.....	.....	29,795	33,535

TWO GOOD DUNDEE PRODUCERS ARE COMPLETED IN MT. PLEASANT AREA

By Special Correspondent

MUSKEGON, Mich., Nov. 25.—Two good producers were completed in the Dundee formation in the Mount Pleasant Field where a large number of wells nearing completion in the same formation are expected next week to result in a marked increase in production.

The larger of the two new oil wells is the Sias Oil & Gas Co.'s No. 2 McClintic, SW NW Section 1-14-3, Chippewa Township, Isabella County. It made 350 bbls. initial topping the Dundee at 3,527 feet and was completed at 3,581 feet.

The Stork Oil Co.'s No. 3 J. Coon (Stilgenbauer & Russell), SE NE Section 12-14-3, Chippewa Township, was completed as a 200-bbl. initial well on the same lease with a recent new 1,000-bbl. well drilled by the same independent operators.

The Sias Company and the Ohio Producing & Refining Co. have a joint interest in the No. 2 Weidman, NE SW Section 12-14-3, Chippewa Township, which also was reported drilled into the Dundee formation as a 140-bbl. well.

The E. Brown Development Co.'s No. 1 Brown, NE NE Section 3-14-3, Chippewa Township, was especially interesting to operators throughout the field because it had a good show of oil in the upper Traverse at 2,915 feet, and is located considerably ahead of present production. It will be completed in the Dundee this week.

Other wells nearing the Dundee formation in the field which probably will be completed within the next week include the following six wells of the Pure Oil Co.: No. 3-A Reem, SW SE Section 12-14-3, which had several hundred feet of fluid in the hole from the upper Traverse; No. 2-B Reem, NE SE Section 12-14-3, below the Traverse and No. 4-B Reem, NW SE Section 12-14-3, drilling in the Traverse; State-Isabella 2-A and 3-A, SW NE Section 12-14-3; No. 6 J. Fox, SE NW Section 13-14-3, and No. 4 Gibson, SW SW Section 12-14-3.

The J. M. Markle No. 1 Dodds, NE NW Section 34-15n-3w, Denver Township, struck salt water in the Dundee at 3,592 feet and was dry.

Six Permits in Mount Pleasant Area

Six of the nine new locations for which permits were issued last week by the Michigan conservation department are located in or near the Mount Pleasant Field. One of the three others also is a wildcat south of the Mount Pleasant Field.

Two offsets to the Wittmer-West well which opened a new territory directly north of the city of Mount Pleasant recently in Isabella Township, Isabella County, will be drilled. Permits are for the Wittmer Oil & Gas Properties' No. 1 Mary West, NE SE Section 25-15n-4w, Isabella Township, and the same com-

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pany recompleted No. 5 Steinly doing 2,730 bbls. daily from 7,930 feet and would also have chalked up another if a satisfactory water shut off had been effected in No. 5 Foix. This well came in wet from 6,234 feet, however, and another cement job will be necessary on the 6⅝-inch landed at 6,120 feet. The Richfield and Union each recompleted a small well in the deep zone. The former, No. 4 Wardman, made 840 bbls. per day from 7,133 feet, while the latter's No. 32 Beil showed an initial of 600 bbls. daily from 7,171 feet. The Standard's No. 18 Weisel came in doing 1,330 bbls. per day from 7,993 feet.

Elwood

The past week witnessed the completion of another large producing well in the prolific Elwood Field of Santa Barbara County and a check indicates the probable completion of several more within the next few weeks as Nos. 9 and 10 on the Bell Luton lease of the Barnsdall and Rio Grande and No. 1 Goleta of the Pacific Western Oil Co. are standing cemented just above the pay. The Honolulu Consolidated's No. 1 on tideland drilling permit No. 90 should also be successfully finished in the near future if adequate tankage and transportation facilities are made available. The completion of this well has been retarded because the company has no way of disposing of any production secured. This potential producer is located out in the open ocean beyond the tide line on a 137.1 acre tideland drilling permit fronting on the Bell Luton property of the Barnsdall and Rio Grande. It is not practical to build sufficient storage out in the open ocean to permit the completion of this well because of the possibility that a heavy sea might cause irreparable damage by wrecking storage facilities built, in which event the company would be liable for considerable damage and officials prosecuted for pollution of navigable waters. The State of California, having a royalty interest in the future production of this well, has instituted court proceedings with a view of condemning a right of way across the Bell Luton and Doty properties and further efforts have been made to induce the Ventura County supervisors to build a county road through these two parcels in order to grant those developing tideland permits access to their respective properties. No definite action has yet been taken in either case.

The new producer finished in the Elwood Field this week was Caroline Spalding's No. 1 on tideland drilling permit No. 93. This project is located in the extreme western part of the field and its completion extended the productive limits several hundred feet. In doing so, it also improved the status of the Pacific Western's tideland drilling permit No. 92 located to the east. The new well just finished registered an initial of 3,950 bbls. daily from 3,705 feet, the hole having been completed with a 6⅝-inch liner. This new well is the seventeenth completion in the Elwood Field since its discovery by the Barnsdall and Rio Grande in July, 1928, and is the fifth producer to be finished out in the open ocean since tideland development was initiated. Other tideland producers are the Bankline's No. 1 on permit No. 89, flowing 3,500 bbls. daily, the Pacific Western's No. 1 on permit No. 92, doing 2,750 bbls. daily and the Barnsdall and Rio Grande's No. 1 on permit No. 88, flowing 2,450 bbls. and No. 1 on permit No. 94, flowing 2,660 bbls. daily.

The substantial production secured out beyond the shore line has greatly stimulated tideland development with the result that a number of new wells will be started in addition to those already under way. The Bankline is pouring cement for the foundation of a second project on permit No. 89, while the Pacific Western is erecting one new rig and building piers for two more potential producers on permit No. 92. The Honolulu Consolidated, which has one well ready for production as soon as tankage and transportation facilities are available, has started work on two more derricks to be located on the same permit, No. 90. The Signal Oil & Gas Co., which holds two tideland drilling permits west of Caroline Spalding's new producer, recently started two new wells and it is quite probable that an additional well will be started by the latter in the very near future. The Barnsdall and Rio Grande are likewise pursuing an aggressive tideland development program, although these operators would rather prolong work in the interests of conservation. They are forced, however, to meet lease requirements and offset well for well on adjoining acreage. On permit No. 88, the Barnsdall and Rio Grande have one producer and have started rig construction for another new project. This is in addition to the two new wells recently started on tideland drilling permits Nos. 95 and 96. In addition to this tideland development, the Barnsdall and Rio Grande are also drilling offsets on the Bell Luton lease, one of which, No. 17, is an offset to the Bankline's well No. 2 on drilling permit No. 89, both of which are just getting under way.

Ventura Avenue

The Associated Oil Co. chalked up two nice wells in the Ventura Avenue Field this week and incidentally increased its daily production 5,870 bbls. Most of this increase resulted from the completion of No. 12, a new well which the Associated finished on the Ventura Land & Water Co. lease a few days ago doing 4,550 bbls. of crude and 2,100,000 feet of natural gas initially from an even 7,400 feet. From a production standpoint this well is one of the best completions listed at Ventura Avenue this year. The Associated's No. 65 Lloyd, which came in doing 5,050 bbls. per day from 7,345 feet last April, and the Shell's No. 41 Taylor, finished in August doing 4,660 bbls. daily from 7,062 feet, are the only two wells completed since January 1, 1929, which have surpassed the output of No. 12 Ventura Land & Water. The real significance which attaches to the completion of the Associated's new well lies in its structural location as it is situated in the extreme eastern part of the Ventura anticline. It naturally proves up a lot of acreage for substantial production, all of which is held by the Associated. Several good wells have been finished north and even further east than No. 12 Ventura Land & Water, but none of them has been satisfactory. Perhaps this may be due to the fact that this project is located further south, but in any event the Associated has greatly improved the outlook for substantial production to the south and west.

In addition to finishing this important new well, the Associated recompleted No. 26 Lloyd doing 1,320 bbls. of 29.1 gravity oil daily from an even 6,900 feet. This project was originally completed in April, 1926, doing 5,816 bbls. daily from 5,925 feet. Completions in the Ventura Avenue Field have not been very numerous during the past several months due primarily to the slowing up of development work in conformity with conservation activities which have been under way for some time. A check indicates the probability, however, that several new wells should be completed in this prolific field during the next 60 days. The Shell Oil Co., with 17 strings of tools to its credit, will probably finish three potential producers between now and the close of the current year and, unless something unforeseen develops, the Associated should finish a like number. The Bolsa Chica Oil Co. and the Petroleum Securities are also expected to finish one new well.

Two new wells got under way in the Rincon Field of Ventura County this week and another, No. 2 Ferguson of the General Petroleum, should begin making hole very soon as this project is being rigged up preparatory to an early spud. No. 2 Ferguson will be drilled out in the open ocean at the end of a 1,600-foot wharf on the assumption that a part of the Rincon structure will be found substantially productive out beyond the shore line. This, of course, remains to be seen, although it is a foregone conclusion that the company will encounter the shallow sands which are now producing along the shore line. The most interesting feature in connection with the drilling of this tideline permit, however, lies in the possibility that it may be possible to develop commercial production in the deep Hobson zone encountered by the Richfield Oil Co. just inside the shore line several months ago.

Summerland

George F. Getty successfully finished another producing well in the Summerland Field of Santa Barbara County where production has been secured out in the open ocean for a number of years. Getty's new project is No. 2 fee, located on the Becker property within throwing

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IMPORTANT NORTHERN CALIFORNIA WILDCATS

Company, well location—	S-T-R	Depth	Status
Union, No. 1 Buel Canyon, Santa Barbara Co.	X- 7-31	2,275	br. sh. drilling
Standard, No. 1 Point Conception, Santa Barbara Co.	X- 5-34	2,629	fishing
Standard, No. 1 Point Arguello, Santa Barbara Co.	35- 6-36	2,170	gr. sd. drilling
Gaviota Oil Co., No. 1 Lompoc, Santa Barbara Co.	9- 7-35	2,677	hd. sd. drilling
Calif. Oil Prop., No. 1 San Marcos, Santa Barbara Co.	3- 4-28	3,210	Sespe drilling
Carey, A., No. 1 Goleta, Santa Barbara Co.	1- 4-28	1,790	cemented
General Pet., No. 1 Goleta, Santa Barbara Co.	21- 4-28	4,533	gas well—idle
General Pet., No. 2 Goleta, Santa Barbara Co.	21- 4-28	2,891	sd. sh. drilling
Oakburn Oil Co., No. 1 Capitan, Santa Barbara Co.		mtl.	driving piles
Standard, No. 2 Goleta, Santa Barbara Co.	X- 4-29	511	sd. sh. drilling
Tannehill, L. B., No. 1 Goleta, Santa Barbara Co.	24- 4-29	3,804	sd. sh. drilling
McGee, Omar, No. 1 Goleta, Santa Barbara Co.	12- 4-29	Rig	suspended
Standard, No. 1 County Farm, Santa Barbara Co.	11- 4-28	1,280	sd. sh. drilling
Fields Gasoline Co., No. 1 Orcutt, Santa Barbara Co.	36-10-34	4,680	br. sh. drilling
Keystone Oil Co., No. 1 Santa Maria, Santa Barbara Co.	33-10-34	4,250	suspended
Wildcat Oil Co., No. 1 Santa Maria, Santa Barbara Co.	20-10-35	3,760	br. sh. drilling
Pacific Western, No. 1 Gibraltar, Santa Barbara Co.	14- 5-27	1,745	sd. sh. drilling
Gilmore Oil Co., No. 1 Gibraltar, Santa Barbara Co.	1- 5-28	Rig	rigging up
Shell, No. 1 Summerland, Santa Barbara Co.	18- 4-25	1,160	sd. sh. drilling
Standard, No. 1 Casitas, Santa Barbara Co.	26- 4-25	...	location
Continental, No. 1 Carpenteria, Santa Barbara Co.	33- 4-25	4,130	gas well—idle
Continental, No. 2 Carpenteria, Santa Barbara Co.	33- 4-25	4,560	abandoning
Continental, No. 3 Carpenteria, Santa Barbara Co.	33- 4-25	...	location
Standard, No. 5-9 Saticoy, Ventura Co.	10- 2-22	8,183	redrilling
Bolsa Chica, No. 1-A Temescal, Ventura Co.	4- 4-18	1,200	hd. sd. drilling
Associated, No. 1 Rincon, Ventura Co.	19- 4-24	mtl.	building rig
Miley, E. J., No. 2 Casitas, Ventura Co.	7- 3-23	1,870	suspended
Frank Oil Co., No. 1 Fillmore, Ventura Co.	35- 4-20	3,168	cleaning out
Continental, No. 3 Sulphur Mountain, Ventura Co.	21- 4-22	5,450	br. sh. drilling
Lockwood Oil Co., Well No. 1, Ventura Co.	28- 8-21	682	hd. sd. drilling
Milham Explin., No. 1-A Buttonwillow, Kern Co.	8-28-23	4,662	gas well—idle
Milham Explin., No. 2 Buttonwillow, Kern Co.	8-28-23	2,730	gas well—idle
Milham Explin., No. 3 Buttonwillow, Kern Co.	8-28-23	2,694	gas well—idle
Milham Explin., No. 4 Buttonwillow, Kern Co.	6-28-23	2,670	gas well—idle
Milham Explin., No. 5 Buttonwillow, Kern Co.	5-28-23	2,500	gas well—idle
Milham Explin., No. 6 Buttonwillow, Kern Co.	8-28-23	2,676	gas well—idle
Milham Explin., No. 7 Buttonwillow, Kern Co.	6-28-23	2,720	suspended
Milham Explin., No. 8-A Buttonwillow, Kern Co.	8-28-23	2,673	gas well—idle
Milham Explin., No. 9 Buttonwillow, Kern Co.	8-28-23	4,912	redrilling
Milham Explin., No. 10 Buttonwillow, Kern Co.	8-28-23	2,672	suspended
Elmer Oil Co., No. 1 Bena, Kern Co.	15-30-30	3,790	hd. sd. drilling
Elmer Oil Co., No. 1-A Rosedale, Kern Co.	33-29-26	5,260	suspended
General Pet., No. 1 Rosedale, Kern Co.	23-29-26	4,690	hd. sd. drilling
The Texas Co., No. 1 Edison, Kern Co.	23-29-29	3,388	sd. sh. drilling
Symark Oil Co., No. 1 Edison, Kern Co.	24-29-29	2,130	cleaning out
McVey, Max., No. 1 Jasmine, Kern Co.	23-25-27	Rig	idle
Shell Oil Co., No. 1 Lerdo, Kern Co.	5-29-27	6,060	hd. sd. drilling
Union, No. 2 San Emidio, Kern Co.	5-10-21	3,690	redrilling
Mallery, Willard, No. 1 San Emidio, Kern Co.	9-10-23	515	sd. sh. drilling
Eubank, E., No. 1 San Emidio, Kern Co.	11-10-24	...	location
Currency Pet. Co., No. 1 Jacalitos, Fresno Co.	28-21-14	2,606	suspended
Knudsen, John, No. 1 Jacalitos, Fresno Co.	14-21-14	880	bl. sd. drilling
Rio Grande Oil Co., No. 1 Kerman, Fresno Co.	14-13-17	3,561	sd. sh. drilling
Petroleum Securities, No. 2 Huron, Fresno Co.	28-20-16	6,828	will test
Union, No. 1 Huasna, San Luis Obispo Co.	34-32-15	4,190	br. sh. drilling
Union, No. 1 North Huasna, San Luis Obispo Co.	12-32-14	4,895	gr. sh. drilling
Midwest Refining Co., No. 1 Huasna, San Luis Obispo Co.	34-31-15	2,212	suspended
Panorama Oil Co., Well No. 1, San Luis Obispo Co.	7-31-21	4,019	cleaning out
Paso Robles Synd., No. 1 Creston, San Luis Obispo Co.	27-27-11	3,742	suspended
Latin American, No. 1 Shandon, San Luis Obispo Co.	31-27-15	3,910	plug back
Colusa Oil Co., Well No. 1, Colusa Co.	31-15- 4	700	hd. sd. drilling
Kuhns, H. L., Well No. 1, Merced Co.	8-12-19	660	suspended
Foster & Hamil, Well No. 1, Alameda Co.	21- 3- 3	1,172	hd. sd. drilling
Shell, No. 1 Dudley, Monterey Co.	15-22- 9	5,050	sd. sh. drilling
Chessher, H. B., No. 1 Dudley, Monterey Co.	8-22- 9	245	suspended
Union, No. 1 King City, Monterey Co.	8-22- 8	2,426	br. sh. drilling
Standard, No. 1 King City, Monterey Co.	23-22- 7	2,500	br. sh. drilling
Penn Western, No. 1 Tulare Lake, Kings Co.	24-21-18	1,338	set pipe
Dudley Ridge Synd., No. 1 Tulare, Kings Co.	12-23-19	1,305	gas wl-shut in
O'Donnell, J. E., No. 1 Dudley Ridge, Kings Co.	7-23-20	1,911	sd. sh. drilling
Porter, H. B., No. 1 Devils Den, Kings Co.	9-24-17	2,387	br. sh. drilling
Getty, Geo. F., No. 1 Button, Madera Co.	18-13-16	1,972	sd. sh. drilling
Twin State Oil Co., No. 1 Soldani, Mendocino Co.	14-12- 7	1,238	sd. sh. drilling
Elmer Oil Co., No. 1 Timbers, San Joaquin Co.	6- 3- 9	...	location
Barnhart Trust, No. 1 Oakdale, San Joaquin Co.	3- 2-10	2,453	sd. sh. drilling
White, Roy, No. 1 Pixley, Tulare Co.	8-23-26	2,377	suspended
Terminal Oil Co., No. 1 Tulare, Tulare Co.	29-20-25	3,711	br. sh. drilling
Terra Bella Oil Co., No. 1 Porterville, Tulare Co.	35-22-27	Rig	rigging up

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Ohio Oil Co., No. 1 Del Rey, Los Angeles Co.	21- 2-15	6,199	cemented
Marblehead Ld. Co., No. 1 Santa Monica, Los Angeles Co.	1- 2-19	1,894	sd. sh. drilling
Clearwater Oil Co., No. 1 Bellflower, Los Angeles Co.	21- 3-12	1,149	sd. sh. drilling
Continental, No. 1 Alamitos, Los Angeles Co.	34- 4-12	4,000	hd. sd. drilling
Burlingham Pet. Co., No. 1 Compton, Los Angeles Co.	17- 3-13	2,204	cleaning out
Big Boy Drlg. Co., No. 1 Compton, Los Angeles Co.	22- 3-15	mtl.	building rig
Commonwealth Sec., No. 1 Compton, Los Angeles Co.	21- 3-13	50	sd. drilling
Law & Law, No. 1 Watts, Los Angeles Co.	8- 3-13	mtl.	building rig
Hanners, George, No. 1 Watts, Los Angeles Co.	8- 3-13	3,177	sd. sh. drilling
Diller, W., No. 1 Watts, Los Angeles Co.	8- 3-17	mtl.	building rig
Cal. Well Drlg. Co., No. 1 Compton, Los Angeles Co.	11- 4-13	8,500	recemented
Archer Oil Co., No. 1 Watson, Los Angeles Co.	17- 4-13	4,350	gr. sd. drilling
Harber Oil Co., No. 1 Watson, Los Angeles Co.	17- 4-13	...	material
Russell Oil Co., No. 2 Joughin, Los Angeles Co.	23- 3-17	2,418	suspended
Pomona Oil Co., Well No. 1, Los Angeles Co.	32- 1- 8	1,320	cleaning out
Anchor Oil Co., No. 1 Puente, Los Angeles Co.	19- 2-10	4,820	suspended
Rucker, R. C., No. 1 Puente, Los Angeles Co.	27- 2-10	2,755	sd. sh. drilling
The State Co., No. 1 Puente, Los Angeles Co.	5- 2-10	2,470	hd. sd. drilling
Keck & Hall, No. 1 Puente, Los Angeles Co.	32- 2- 8	400	hd. sd. drilling
Urmi Oil Co., No. 1 Puente, Los Angeles Co.	31- 2- 8	1,511	suspended
Los Gatos Oil Co., No. 1 El Monte, Los Angeles Co.	16- 1-11	1,311	hd. sd. drilling
Union Oil Co., No. 1 Richfield, Los Angeles Co.	13- 3- 9	1,850	br. sh. drilling
Superior Oil Co., No. 1 Richfield, Los Angeles Co.	32- 3- 9	3,820	sd. sh. drilling
Coastline, No. 1 Devils Canyon, Los Angeles Co.	21- 5-17	1,890	gr. sd. drilling
Martin, J. W., No. 1 Newhall, Los Angeles Co.	22- 1-17	695	gr. sd. drilling
Consolidated Oil Co., No. 1 Newhall, Los Angeles Co.	22- 3-16	380	hd. sd. drilling
Anderson, P. B., No. 1 Hasley Canyon, Los Angeles Co.	1- 3-16	688	cemented
Shell, No. 1 Bolsa, Orange Co.	18- 5-11	1,295	hd. sd. drilling
Shell, No. 1 Coyote, Orange Co.	28- 3-10	6,050	redrilling
Standard, No. 1 Coyote, Orange Co.	21- 3-10	1,180	sd. sh. drilling
Union, No. 1 Coyote, Orange Co.	30- 2-10	Rig	rigging up
Beard, G. F., No. 1 Brea Canyon, Orange Co.	30- 2- 9	1,016	br. sh. drilling
Western Gulf, No. 1 Brea Canyon, Orange Co.	28- 2- 9	...	location
Mesa Pet., No. 1 Newport, Orange Co.	21- 6-10	3,914	recemented
Oil Well Eng. Co., No. 1 Newport, Orange Co.	21- 6-10	2,795	testing
Oil Well Eng. Co., No. 2 Newport, Orange Co.	21- 6-10	mtl.	suspended
Hall Pet. Co., No. 1-A Murrietta, Riverside Co.	23- 7- 3	701	cemented
Hemet Pet. Co., No. 1 Ward, Riverside Co.	9- 5- 1	3,403	suspended
Imperial Valley Oil Co., Well No. 1, Imperial Co.	32-11-10	2,980	suspended
Turner, S. S., No. 1 Escondido, San Diego Co.	25-12- 2	3,005	sd. sh. drilling
McGregor Synd., No. 1 Del Mar, San Diego Co.	17-14- 3	1,060	sd. sh. drilling
Borderland Oil Co., No. 1 Encinitas, San Diego Co.	X-13- 4	1,095	sd. sh. drilling
China American Oil Co., No. 1 Oasis, San Bernardino Co.	17- 4- 4	mtl.	suspended
Grey, H. H., No. 1 Redlands, San Bernardino Co.	25- 1- 2	2,400	hd. sd. drilling
Duncan, N. I., No. 1 Mojave, San Bernardino Co.	8- 4- 6	Rig	rigging up

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Strength is the vital essential of all champions. In a man—strength of muscle, nerve and character. In a derrick—strength in design, in materials and in assembly. Moore Champion Derrick strength results from the complete unity of the several parts, each with strength in proportion to the demands upon it.

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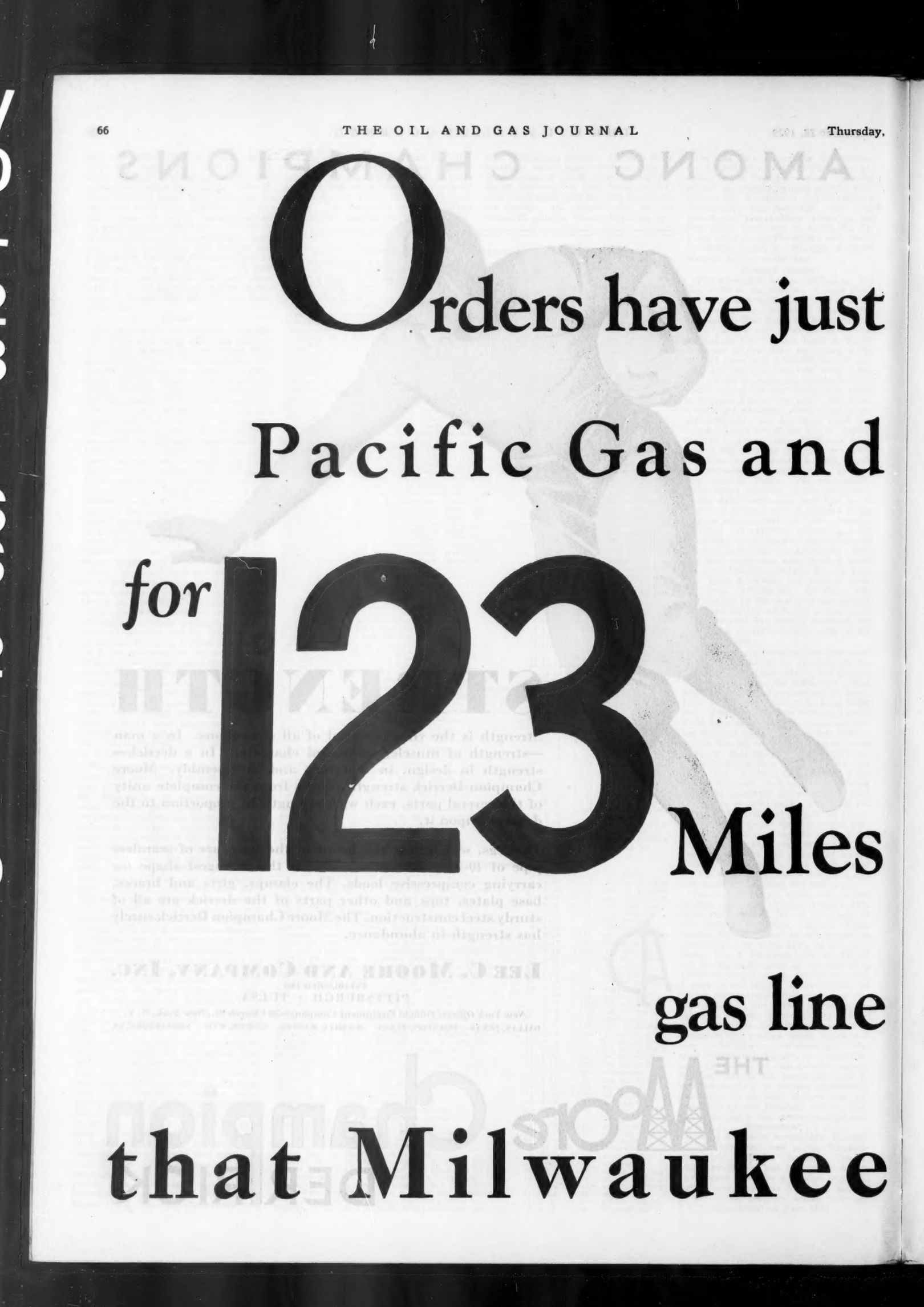
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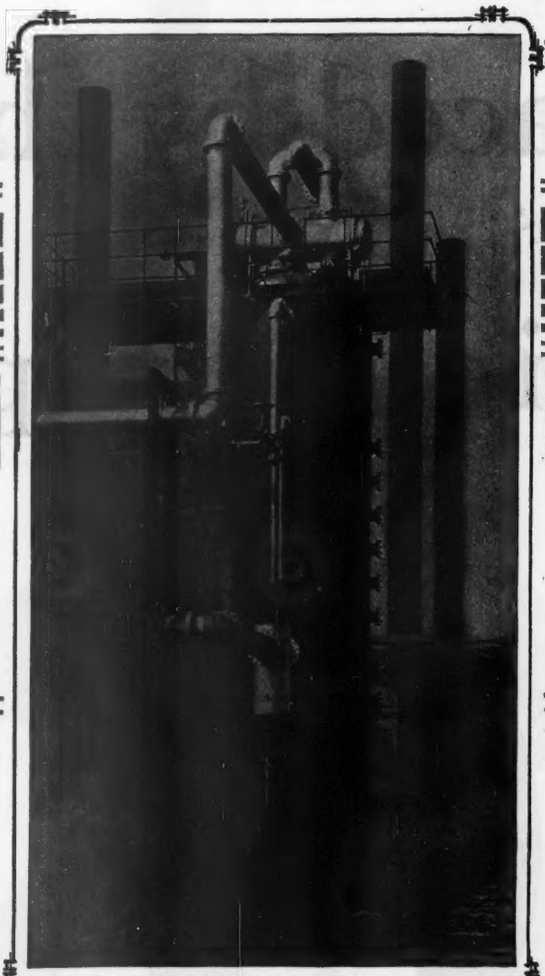

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New Pay in Shipley Pool, Ward County

Good Showing of Sweet Oil in Menard County. Second Producer in Pryor or Courtney Pool in Pecos County

By L. E. Bredberg
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., Nov. 25.—West Texas had several particular spots of interest to the oil industry during the week, but the district, as a whole, was covered with features which were of great enough significance to attract the attention of many operators and companies. Pecos County, again, came in for its usual bit of attention, while farther north Ward County laid claim to a definite new pay horizon in the Shipley Pool. Far to the southeast Menard County had a good showing of sweet oil in one of its tests, while producers of the Howard Glasscock County pools were in Fort Worth unraveling the pipe line and proration situation of those pools.

The test on the Masterson Ranch, Pecos County, owned by Cranfill & Reynolds, Anderson-Pritchard and Monte Warner, now looks sure as a small commercial producer, as it stands. This well is in Section 104, Block 10, H.&G.N. Survey, about 4 miles south of Buena Vista, and lends much confidence to the surrounding area. It is shut down at 1,440 feet flowing by heads. The first oil showing was picked up from 1,249-50 feet and the oil increased while drilling at 1,277 feet, but the biggest pay seems to have been found at 1,439 feet. The well was heading once in about every 20 hours while shut down at 1,439 feet, the heads averaging about 15 bbls. each, the oil testing 32 gravity, and believed to be coming from sand above the lime. One thousand barrels storage has been erected, with 180 bbls. already in storage from the well.

Second Pryor Producer

The Pryor or Courtney Pool, 9 miles northwest of Fort Stockton, Pecos County, now appears to have its second producer about to be completed. The Phillips Petroleum Corp. has shut down its No. 3 Pryor at 1,389 feet after having encountered a showing of oil from 1,370-74 feet and an increase from 1,380-85 feet. While shut down it filled 500 feet in eight hours, practically proving worthy of another well in the pool, where there is the company's No. 2 Pryor or Courtney producing an average of 100 bbls. daily. As yet there is no pipe line outlet for this pool, but since the completion of this second well some method of transporting the crude will no doubt be arranged for by the Phillips company, possibly a line laid from the wells to a point on the Orient Railroad near Fort Stockton, and the oil loaded out on tank cars. This would seem the best method of transporting the production for there is no pipe line anywhere near this pool.

Another interesting bit of information came from the Jayhawk Oil Co.'s No. 1 Price near the south line of Section 6, Block 12, H.&G.N. Survey, 3 miles northeast of the Rowan and Tong Pool. This test showed 10 feet of oil in the hole after standing seven days at a total depth of 1,561 feet. It is not known just what the company will do with the test now. It had been shut down at 1,561 feet for repairs when the oil started filling the hole. The oil is undoubtedly coming from the bottom of the hole.

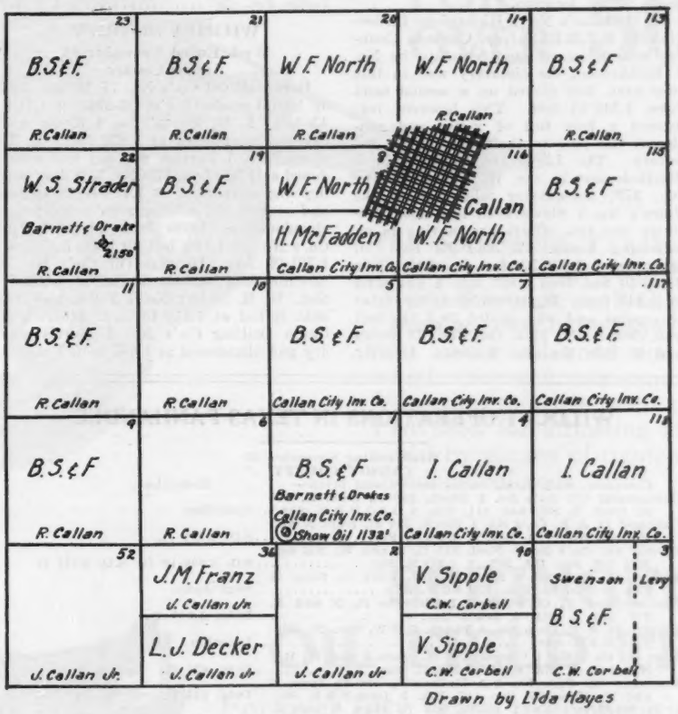
Rowan and Tong Pool

The Independent Oil & Gas Co. has plugged its No. 1 McDonald in Section 46, Block 12, H.&G.N. Survey, Pecos County, the well which opened up the Rowan and Tong area to exploration by several tests. It was deepened to 1,644 feet after it went dead and was shot with 40 quarts from 1,587-1,627 feet, but with no results. The well produced 4,000 bbls. of oil before going dead. All offset wells drilled to this discovery were dry and the drying up of this producer erases the name of the pool from the producing list.

The Kingwood Oil Co.'s deep test on the Suggs Ranch in Section 19, Block 1, H.&T.C. Survey, Irion County, encountered another showing of oil and gas this week while drilling at 7,656 feet. The gas gauged 116,000 feet and was wet. Two barrels of very light oil were condensed from the gas, practically the same kind of oil as that which is being produced from Group No. 1 Oil Co.'s No. 1-B University in the Big Lake Pool, Reagan County. Last report on the well gave it as drilling at 7,741 feet in brown lime.

This is the only deep well now drilling below 7,000 feet in the Permian Basin outside of the Big Lake Pool where the Big Lake Oil Co. and Group No. 1 Oil Co. are drilling more deep tests and where there are now three deep producers.

The Big Lake Oil Co. has recovered the tools from its No. 4-C University and intends deepening it. It flowed 272 bbls. of oil the past 24 hours after the tools were fished out. Total depth of this well is 8,220 feet. This depth is where the gas and oil were found, the gas causing such a pressure as to blow the tools 5 feet back up the hole where they were stuck and caused a fishing job.



Plat showing location of Barnett & Drake's No. 1 Callan City Investment Co., Menard County, test which encountered a good showing of oil in sand at 1,132 feet. This county has had several good showings of oil in various tests, but so far, have not yielded any commercial producers. The dry hole shown in Section 22 also had showings of oil and this second test was drilled on the basis of those showings.

Menard County Showing

Menard County gained considerable attention to itself this week when Barnett and Drake's No. 1 Callan test in Section 1, B.S.&F. Survey, just south of the town of Callan, encountered an oil sand from 1,132-52 feet with a good showing of oil. Ten barrels of water per hour from 850 feet makes it rather difficult to tell much about the size of the showing, but as soon as pipe is underreamed down a test will be made to see just what the well may have. It is now shut down at 1,152 feet waiting on an underreamer.

This county has had several good showings in other tests, one having been found in Barnett & Drake's No. 1 Callan, about 2 miles northwest of the present No. 1. This second test was no doubt drilled on the basis of the showing found in the first. All of these showings in this county have been sweet oil from sand, and so far none has been of sufficient quantity to produce any commercial amount, although the showings always stimulate interest in the county, and at present several companies are taking leases in various parts of it.

L. G. Priest and others' No. 1 Allison in Section 52, Block A, G.W.&T.P. Survey, Sutton County, was plugged back from 4,020 feet to 3,655 feet and shot with 30 quarts from 3,627-55 feet, but when the well was bailed and cleaned out after the shot there was but little oil showing. The first showing of oil was found at 3,625 feet and an increase registered at 3,690 feet, neither being very substantial.

Val Verde Resumption

After being shut down at 4,250 feet for about a year and a half, O. O. Owens and others' No. 1 Mills, in Section 128, I.&G.N. Survey, Val Verde County, is now drilling at 4,925 feet in black shale. This well created considerable excitement about two years ago when it encountered a wet gas sand from 2,491-2,520 feet, the gas testing 125,700 feet. After the well was drilled to 4,250 feet it was shut down at that depth and has been standing for the past year and a half.

As this test is in absolutely wildcat territory in the southern part of the Permian Basin and encountered a good showing of gas it is extremely interesting to those watching this area. Another test is being drilled to the northwest by the Transcontinental Oil Co. on the Goode ranch. This test is to go to 5,000 feet and is to test the Panhandle-Stone Bend structure which was geologized by George A. Kroenlein of San Angelo, Tex. This second test for this area will also be closely watched, especially when it gets down in the vicinity where the gas was picked up in the Mills test.

While one failure was being marked down for Ward County this week, another success was greatly offsetting it, for it is practically proved that a second pay horizon has been found in the Shipley Pool by the Shell Petroleum Corp. in its No. 1 Owens in Section 16, Block 5, H.&T.C. Survey. It missed the Shipley pay but picked up a new horizon at 2,909 feet and started filling with oil, testing about 32 gravity. On November 23 it stood 1,500 feet of oil in the hole and 700 feet of water, was then swabbed, yielding 145 bbls. of fluid, a small per cent being water. It was swabbed dry, then allowed to stand overnight. During the 24 hours ending 7 a.m., November 24, it swabbed 15 bbls. of oil. Eight-inch casing with a packer was run to 2,690 feet and the well is now ready to test. It is believed brown and gray lime will both offer production in this pool, and that the eight wells now producing from the first pay, about 469 feet higher, will be deepened to the second pay if they fall off greatly in production from the first pay. The Atlantic Oil Producing Co. and Delmar Oil Co. have made a location for No. 6 Hayzlett, 2,690 feet from the northeast and northwest of Sec-

(Continued on Page 74)

WILDCAT OPERATIONS IN WEST TEXAS

Week Ending Noveber 25

ANDREWS COUNTY

Company, farm and location—Remarks—

Deep Rock's No. 1 Ogden, 2,310 ft. E, 330 ft. S, Sec. 6, Blk. A-46, Public School Land ..... Gas show 2,895-2,900 ft.; show oil 2,900-10 ft.; 2,000,000 ft. gas 2,-910-25 ft.; drlg. 3,705 ft.

BORDEN COUNTY

Moncrief et al's No. 1 Munger, C of SW, Sec. 14, Blk. 31.. Shut down 2,425 ft.

Teas & Wheeler's No. 1 Long, 1,320 ft. N and E of Sec. 27, Blk. 30, T.&P. Sur..... Top salt 1,030 ft.; underreaming 3,815 ft.

BREWSTER COUNTY

E. W. Bateman et al's No. 2 Nevill, 2,000 ft. S and W line of Sec. 62, Blk. 13, G.H.&S.A.R.R. Sur..... Shut down 2,274 ft.; fishing.

Brewster Oil Co.'s No. 1 fee, 2,640 ft. S and 2,598 ft. E of NW cor., Sec. 45, Blk. G-15, G.C.&S.F. ..... Fishing 1,935 ft.

Cowden & Bowser's No. 1-A Jackson & Harmon, Sec. 1, Blk. 331, T.C.R.R. Sur. ..... Set 8-in. 1,550 ft.; shut down 2,000 ft.

Forrest Oil Co.'s No. 1 Skinner, C SW SE, Sec. 100, Blk. 2, G.C.&S.F. Sur. ..... Shut down 830 ft.

(Continued on Page 112)

Semiwildcats in Baylor and Cooke

Gray County Completions Increase Production 4,000 Bbls. Disappointment and Good Well in Coleman County

By L. E. Bredberg
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., Nov. 25.—Semiwildcats in Baylor and Cooke Counties are practically the only important events of the week in the Panhandle and Wichita Falls districts, outside of several good wells being completed in Gray County raising that county's daily average about 4,000 bbls. over the previous week.

Shell Petroleum Corp. and Fain-McGaha Oil Corp.'s No. 1 J. K. French in the Tarver Pool, Foard County, is still "marking time" shut down at 2,033 feet where it will be shot and tested. It had a good oil showing three weeks ago in sand at 2,003 feet and an increase at 2,011 feet but so far this showing has not terminated in a commercial producer. Another week will no doubt tell whether this well will be completed as a producer or numbered among the "dusters."

An interesting deal has taken place in Wilbarger County where the Waggoner Refining Co. has sold 1,750 bbls. of oil per day to the Iowa Park Refining Co., 750 bbls. to the Falls Refining Co. and 2,000 bbls. daily to the Taxman Refining Co., the oil to be delivered by the Continental Pipe Line Co. The Taxman Refining Co. is making some changes on its refinery, and deliveries will start as soon as the refinery is again operating.

One of the big wells of the week in Gray County was completed by the Operators Oil Co. in its No. 8 Cooke-Faulkner, in the W half of Section 30, Block B-2, H.&G.N. Survey. It topped the granite wash pay from 2,750-2,800 feet and was completed at 2,812 feet flowing 40,000,000 feet of gas with 2,970 bbls. of oil in 24 hours. This was the largest well in this county for the week, and was greatly responsible for the increase in the daily average of Gray County. The well had been shut down for some time in the top of the pay in accordance with the agreement entered into by the majority of the producers and companies operating in Gray County.

Semiwildcat in Baylor

Grisham and Barnsdall Oil Co.'s No. 1 Portwood, in the SW corner of the SE of Section 1,281, T.E.&L. Co. Survey, Baylor County, is a semiwildcat in the extreme SE corner of the county opening up more territory. It is shut down at 1,402 feet waiting to be put on the pump. It encountered a broken oil sand from 1,375-76 feet and a second oil sand from 1,388-98 feet, the third from 1,398-1,402 feet, and swabbed 60 bbls. of oil the first 6 hours, guaranteeing a fair sized producer in an area where there are many dry holes.

Ratford and others' No. 1 J. G. Jones in the J. J. Arocha Survey, Cooke County, encountered a broken sand from 1,557-67 feet and bailed a small amount of oil and salt water while standing at 1,583 feet. It will be drilled deeper from 1,583 feet in an effort to pick up more sand. Another week may give us definite information on this test and prove whether more producing area is opened in Cooke County.

In Shackleford County Hart and Wright's No. 1 Clark, the Albany Townsite well made 55 bbls. the first 15 hours on a test and was completed as a 30-bbl. well. This well is on the southern outskirts of the town, in Section 2, B. A. Lands. Total depth is 683 feet. The Tannehill sand was picked up at 680 feet. Offsets will no doubt move in soon, and several operators are endeavoring to obtain permits to drill on town lots. This, however, is up to the City Council and Railroad Commission, and there may be some permits granted for drilling in the city limits.

Central Callahan County

E. P. Campbell's No. 1 I. N. Jackson, in Section 20, E.T.R.R. Survey, north central Callahan County, flowed 160 bbls. the first 12 hours after being shut down at 1,124 feet. Top of the Hays Howland oil sand was struck at 1,123 feet. The oil tests 41 gravity with 48 per cent gasoline content. The owners have erected 500 bbls. storage and are moving in more for it looks as if pipe line connections would be difficult to obtain. The Union Oil Co. of California has made a south offset location.

C. M. Joine's No. 2 Richardson in Section 96, E.T.R.R. Survey, Coleman County, missed the oil sand found in its No. 1 Richardson, the discovery well in this new area, but picked up a second sand from 1,542-56 feet. This however registered a hole full of water and condemns the play to the south of the discovery. The Lloyd Oil Corp.'s No. 1 Bartholomew in the W. Farris Survey No. 279, one-quarter mile NE of the Joine's No. 1 Stewartson, is a good producer and two offsets are moving in on adjoining leases. It had its first oil show from 1,430-33 feet, a shale from 1,436-40 and then went into a gas sand at 1,443 feet. It started spraying oil at this point and was drilled to 1,445 feet and flowed 130 bbls. the first 18 hours and 43 bbls. the next 8 hours. Gravity of the oil in this area tests 41 degrees. The Humble Pipe Line Co. is taking the production, paying around $1.70 per barrel for it.

George Pool

Daily average of the George Pool in Brown County is as follows:

	Wells	Bbls.
Greene Production Co.	3	180
The Texas Company	11	520
E. L. Smith Oil Co.	11	787
G. A. Buder	6	371
Darby Pet. Co.	3	146

WICHITA DISTRICT

Week Ended November 23

Archer County

Barnsdall Oil Co.'s No. 17 Wilson had an initial production of 96 bbls. at 1,713-15 feet. L. T. Burns' No. 1 Kemp was dry and abandoned at 1,852 feet. L. T. Burns' No. 1 Parrish was dry and abandoned at 1,532 feet. His No. 3 Wilson was dry and abandoned at 1,478 feet. Gwynn and others' No. 8 Thompson was dry and abandoned at 1,600 feet. Shappell Oil Co.'s No. 12 Lyles had 30 bbls. initial at 1,701-02 feet. Douglas Oil Co.'s No. 4 McClure had 35 bbls. initial at 1,292-98 feet. W. R. Duke's No. 1 Young had 160 bbls. initial at 1,410-13 feet. Hedrick & Camp Drilling Co.'s No. 1 Harris was dry and abandoned at 1,457 feet. Peacock & Tedford's No. 1 Williams had 8 bbls. initial at 576-79 feet. Petroleum Production Co. and Perkins & Cullum's No. 1 Lauster had 13 bbls. initial at 1,118-28 feet.

Foard County

Humble Oil & Refining Co.'s No. 1 Johnson was dry and abandoned at 5,003 feet. Humble Oil & Refining Co.'s No. 1 Motus made 1,500,000 feet of gas at 855-908 feet and was drilled to 1,020 feet. Wichtex Oil Co.'s No. 1 Johnson had 4 bbls. initial at 1,368-78 feet and was drilled to 2,145 feet.

Wilbarger County

Davis Oil Corp.'s No. 3 Waggoner had 500 bbls. initial at 2,639-70 feet. Easter Oil Co.'s No. 1-D Waggoner was shot with 20 quarts at 2,398-2,424 feet and had 36 bbls. initial. Empire Gas & Fuel Co.'s No. 11 Waggoner had 15 bbls. initial after having been shot with 30 quarts at 2,424-30 feet, drilled to 2,460 feet and plugged back to 2,457 feet. Fain-McGaha Oil Corp.'s No. 14 Waggoner had 140 bbls. initial after having been shot with 20 quarts at 2,270-98 feet. Golding & Cochran's No. 3 Waggoner had 80 bbls. initial at 2,408-22 feet. Grayback Development Co.'s No. 1-B Waggoner had 130 bbls. initial at 2,667-93 feet. Fain McGaha's No. 14 Waggoner had 140 bbls. initial after having been shot with 20 quarts at 2,270-98 feet. Shaw Oil Co.'s No. 6 Waggoner had 58 bbls. initial at 2,412-24 feet. Staley-Wynne's No. 16 Waggoner had 75 bbls. initial at 1,838-61 feet.

Wichita County

Hiland Oil Co.'s No. 1 Burns-Gates had 46 bbls. initial at 1,808-12 feet. Star Drilling Co.'s No. 3-B Crudup was dry and abandoned at 841 feet. Arkansas Fuel Co.'s No. 32-B Kemp & Kempner had 65 bbls. initial at 1,761-68 feet. Bridwell Oil Co.'s No. 5 Burnett was dry and abandoned at 1,941 feet. Couper's No. 1 Foster Allen was dry and abandoned at 1,943 feet. Everts & Samison's No. 2 Gibson had 30 bbls. initial at 1,908-13 feet. Ryan Petroleum Corp.'s No. 111 Nance was dry and abandoned at 512 feet. Sheldon & Venmex's No. 1 Whittenbach had an oil show at 1,926½ feet, was drilled to a total depth of 1,933 feet and had 25 bbls. initial production. Underwood Drilling Co.'s No. 1 Ferguson was dry and abandoned at 1,852 feet.

Young County

Christie's No. 1 Waddell & Hammond was dry and abandoned at 1,264 feet. Johnson and others' No. 1 Edwards was dry and abandoned at 1,282 feet. Long and others' No. 5 McCaghren was dry and abandoned at 955 feet. Perkins & Cullum's No. 5 Lammond was dry and abandoned at 744 feet. United Production Co.'s No. 4 Kunkel was dry and abandoned at 1,158 feet. Wise & Jackson's No. 5 Culler had 30 bbls. initial at 554-95 feet. Baker & Pardue's No. 1 Donnell had 360 bbls. initial at 3,298-3,312 feet. Cunningham's No. 1 Kisenger had 150 bbls. initial at 2,497-2,549 feet.

Cooke County

Petroleum Production Co.'s No. 1 Price was dry and abandoned at 1,925 feet. Simmons & Crowley's No. 3 Wheelock had 15 bbls. initial at 1,309-25 feet. Goline's No. 5 Huggins had 129 bbls. initial at 1,087-1,116 feet. Kewanee Oil Co.'s No. 8 Timmis made 70 bbls. at 1,516-17 feet.

Jack County

L. C. Harper's No. 1 Elzell made 362 bbls. at 3,121-31 feet.

Denton County

Fain & McGaha's No. 1 Miller was dry and abandoned at 1,630 feet. W. E.

(Continued on Page 76)

WILDCAT OPERATIONS IN TEXAS PANHANDLE

Week ending November 25

CARSON COUNTY

Company, well, farm, name, section and block—	Remarks—
Continental Oil Co.'s No. 2 Block, 990 ft. from N, 330 ft. from E, SE, Sec. 111, Blk. 4, I.&G.N.R.R. Sur.	Spudding.
Danciger O. & R. Co.'s No. 1 Block, 330 ft. from N and E lines, Sec. 112, Blk. 4, I.&G.N. Sur.	S.D. 2,851 ft.
Delmar Oil Co.'s No. 5 Noel, 330 ft. S and W, NE cor. W½ SE, Sec. 198, Blk. 3, I.&G.N. Sur.	S.G. 3,000-10 ft; S.D. 3,131 ft.
Empire G. & F. Co.'s No. 1 Fields, 1,650 ft. from N and E, Sec. 13, Blk. 7, I.&G.N. Sur.	Shut down.
Empire G. & F. Co.'s No. 2 Deahl, 660 ft. N and E, SW, Sec. 3, Blk. 5, B.&B. Sur.	Drlg. 1,840 ft.
Empire G. & F. Co.'s No. 1 Thorp, C NW, Sec. 26, Blk. T, A.B.&M. Sur.	Location.
Ham Oil Co.'s No. 1 Cooper, 330 ft. from S and W, E½ NE, Sec. 5, Blk. 9, H.&G.N.R.R. Sur.	Drlg. 477 ft.
Herragan Oil Co.'s No. 1-A McConnell, 330 ft. from N and W, W½ SW, Sec. 187, Blk. 3, I.&G.N.R.R. Sur.	Drlg. 665 ft.
S. D. McElroy's No. 1 Block, 330 ft. from N and E, NE NW, Sec. 112, Blk. 4, I.&G.N.R.R. Sur.	Drlg. 365 ft.
McMan O. & G. Co.'s No. 1 McConnell, 330 ft. from N and E, E½ SW, Sec. 187, Blk. 3, I.&G.N.R.R. Sur.	Spudding.
Osborne et als' No. 3 Percival, 330 ft. N and W, SE cor. E½ NE, Sec. 199, Blk. 3, I.&G.N.R.R. Sur.	Location.
Pansota Oil Co.'s No. 1 Block, 330 ft. S and W, NE cor. SW, Sec. 111, Blk. 4, I.&G.N.R.R. Sur.	Rig.
Phillips Pet. Co.'s No. 1 Garner, 330 ft. N and E, SW cor. SW, Sec. 114, Blk. 4, I.&G.N. Sur.	Fishing 2,940 ft.
Prairie O. & G. Co.'s No. 2 Nail, 330 ft. from N and W lines, N½ E½ SE, Sec. 198, Blk. 3, I.&G.N. Sur.	10,000,000 ft. gas 2,830-2,985 ft; S.D. 3,112 ft.
Red River Gas Co.'s No. 3 Lee Bivins-A, C SE SE, Sec. 43, Blk. M-20, G.&M.R.R. Sur.	S.D. 550 ft.
Shell Pet. Corp.'s No. 1 Percival, 330 ft. from N and E, SE, Sec. 199, Blk. 3, I.&G.N. Sur.	Rig.
Skelly Oil Co.'s No. 19 Schafer, 330 ft. N, 990 ft. E, SW cor. NE, Sec. 198, Blk. 3, I.&G.N. Sur.	6,000,000 ft. gas 2,895-2,970 ft; S. D. 3,100 ft.
Skelly Oil Co.'s No. 20 Schafer, 330 ft. N, 990 ft. W, SE cor. N½, Sec. 198, Blk. 3, I.&G.N. Sur.	S.D. 3,090 ft.
Skelly Oil Co.'s No. 21 Schafer, 340 ft. N, 1,540 ft. W, SE cor. SE, Sec. 68, Blk. 4, I.&G.N.R.R. Sur.	Location.
Stubblefield et als' No. 1 Garner, 330 ft. from S and E lines, SE, Sec. 104, Blk. 4	T.P. 2,990-3,024 ft; I.P. 25 bbls; T.D. 3,080 ft; shot 80 qts. from
The Texas Co.'s No. 3 Noel, 330 ft. N and W, SE cor. NW, Sec. 187, Blk. 3, I.&G.N.R.R. Sur.	Rig.
The Texas Co.'s No. 3 Quinn, 330 ft. N, 990 ft. E, SW cor. E½, Sec. 7, Blk. 9, I.&G.N.R.R. Sur.	Drlg. 105 ft.

CASTRO COUNTY

Colorado O. & R. Co.'s No. 1 M. Slemmons, SW cor., Sec. 73, Blk. M-17, B.S.&F. Sur.	Rig blown down.
Mystery Oil Co.'s No. 1 J. I. Crum, SE cor. NE, Sec. 333, Blk. M-6, S.K.&K. Sur.	S.D. 510 ft. for csg.

CHILDRESS COUNTY

C. L. Sloane et als' No. 1 B. P. Smith, Sur. 49, F. P. Knott lands	S.D. 4,675 ft.

COCHRAN COUNTY

Continental Oil Co.'s No. 1 Slaugh.er-A, 330 ft. from W, 430 ft. from S lines, League 130, Carson County School land	Small S.G. 4,745-50 ft.; T. D. 5,001 ft; P.B. 4,900 ft; oil pay 4,873-88 ft; swbd. 65 bbls. oil and 5 bbls. wtr.
Westbrook et als' No. 1 Slaughter, 400 ft. from S and E, Labour 67, League 118, Knox Co. School lands	Set 8-in. csg. 2,771 ft.

DONLEY COUNTY

Blue Bonnett Oil Co.'s No. 1 Ball, 1,075 ft. from N line, 985 ft. from E line, Sec. 22, Blk. E, D.&P.R.R. Sur.	T.D. 3,006 ft; contract depth.
Marine Oil Co.'s No. 1 Sawyer, C SW, Sec. 5, Blk. G, G.C.&S.F. Sur.	S.D. 3,510 ft.

(Continued on Page 116)

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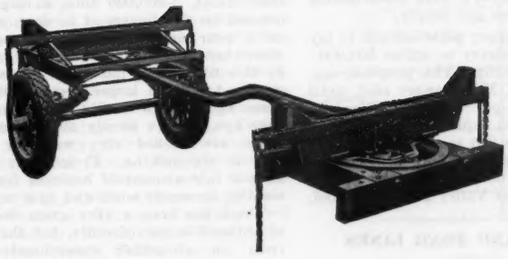

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Pipe Line Construction News

SOUTHERN CALIFORNIA GAS PIPE LINE WORK

LOS ANGELES, Calif., Nov. 23.—The major undertaking of the Southern California Gas Co., subsidiary of the Pacific Lighting Corp., in October was development work in the Kettleman Hills Fields. Since last spring, the company has been busy constructing a pipe line from Kettleman Hills to various San Joaquin Valley towns, and on November 1 three lines were completed.

These comprised a 10-inch line from Kettleman Hills to Lemoore Junction, an 8-inch line from Lemoore Junction to Fresno, and a 6-inch line from the Junction to Visalia. While these transmission lines were being laid, distribution systems were installed in the San Joaquin Valley towns to Lemoore and Armona. A 4-inch lateral from the Fresno line through the Dinuba district system is to complete the change from manufactured gas to natural gas.

The natural gas system from Kettleman Hills to the Valley was tested completely, and on October 21 natural gas introduced into the Hanford district, followed a few days later by natural gas in the Visalia district. Early this month natural gas was supplied to Tulare and vicinity.

Pacific Gas & Electric has completed arrangement in its Fresno district, and shortly will introduce natural gas in the raisin belt. Southern California Gas also is constructing a pipe line from Kettleman Hills to the Buena Vista Hills terminal, where it is planned to connect a line with existing lines into southern California. The two transmission systems at present under construction in the San Joaquin Valley entail an expenditure of approximately $3.125.000."

START MONTANA LINE; SURVEY TO WILLISTON

CASPER, Wyo., Nov. 23.—The Connor Construction Co. of Kansas City has started digging ditch for the gas line between the Bowdoin Dome and Glasgow, Montana. The ditching should be completed by the first of the year.

The Montana Dakota Power Co. is making a survey of the city of Williston, N. D., preparatory to laying a gas service system in the streets. The line that will carry this gas from Cabin Creek, Montana will be 140 miles long and will be 8-inch. It is intended to extend this line to Minot later on and after the service to Wiliston is completed.

The Vanalta well, about 6 miles from Sweetgrass and Couts, on the national boundary, is to furnish gas to these two towns. Coutts is in Canada and Sweetgrass is in the United States. The matter of whether gas can be served from a common line on both sides of the national boundary is causing some discussion. Coutts and Sweetgrass are separated by a single street, the boundary line being in the raiddle of this street, and there seems to be a question arising whether Canada will permit the importation of gas in this instance when exportation was refused when United States citizins contemplated laying a line from the Turner Valley Field into this country.

COLORADO GAS LINES

The Colorado Interstate Gas Co. has completed its 6-inch gas line to the town of Las Animas and Fort Lyon. Lines are also being laid by the company to two other towns in the vicinity, to be completed before winter. Total expenditure is around $250,000.

PACIFIC GAS TO SUPPLY OVER 100 COMMUNITIES

LOS ANGELES, Calif., Nov. 23.—More than 100 communities will be served with natural gas when the valley pipe line of the Pacific Gas and Electric Co. being constructed from Kettlemann Hills to San Francisco Bay and Sacramento is completed next March.

Completion of the new main will give the company 800 miles of gas transmission line in Northern California, said to be the largest interconnected gas distribution system in the country. The new work will entail an expenditure of $9,-984,500.

The company now has in operation its first line to the bay, with branches reaching Oakland and San Francisco. It was the first natural gas pipe line in the bay region.

The new line starts at the Kettleman Hills compressor station and for 150 miles parallels the original line. Two crews of 150 men are at work, one at the compressor station and one in Mendota.

The first part of the line, 159 miles in length on the west side of the San Joaquin Valley, will consist of 840,000 feet of 22-inch electric-welded pipe. At Vernalis the line branches. One runs to Milpitas via Patterson pass and Mission San Jose, and is 28.6 miles in length consisting of a 20-inch pipe. It acts as an emergency service for the first line, which leaves the San Joaquin via Panoche pass.

The second branch of 52.3 miles, 20-inch pipe, runs via San Ramon and Muir to San Pablo and Richmond.

The line to Sacramento also branches at Vernalis. It is a 16-inch main and runs via Manteca, Stockton, Lodi, Galt and Elk Grove.

A. F. Hockenbeamer president of the Pacific Gas and Electric Co., in speaking of the company plans recently said:

"The company is not planning merely to serve natural gas to large centers of population and industry, but is preparing to bring the benefits of this cheaper fuel to substantially the entire territory served by it."

WASATCH LINE EXTENSION

The first important extension of the natural gas pipe line system of the Western Public Service Co. and subsidiaries recently completed from Wyoming and Colorado to Salt Lake City and Ogden will begin shortly. The Wasatch Gas Co. will construct a 17-mile 12¾-inch line from Salt Lake City to Garfield to supply natural gas to the smelter of the American Smeltering & Refining Co. and to several intervening towns. Cost will be $255,000 and line probably will be finished by January 1.

ARDMORE-TISHOMINGO LINE

The Oklahoma Natural Gas Corp. is laying a 6-inch pipe line from Ardmore to Tishomingo and Madill, Okla., to furnish these towns with gas. The total project calls for approximately 40 miles of new line.

NEW LINE TO GREELEY

Greeley Gas & Fuel Co. has contracted for a gas supply in the Berthoud, Colo., field and will lay gas line a distance of about 25 miles, to be completed January 1, 1930.

GAS FOR CANTON, KANS.

A franchise has been granted to the Kansas Pipe Line and Gas Co. to install gas in Canton, Kans. The line will be connected with the McPherson-Medicine Lodge main line.

LINE TO BUTTONWILLOW NEARING COMPLETION

LOS ANGELES, Calif., Nov. 16.—The Pacific Gas and Electric Company is nearly ready to tap the flow of eight gas wells at Buttonwillow and will start a series of tests to determine if the line is ready to carry natural gas to localities in the northern end of the State.

The line has been laid into the area where the Milham Exploration Co. has eight gassers with a combined output of approximately 80,000,000 feet of gas per day. Meters have been installed and other necessary work completed, so it is believed that the line will be carrying capacity within two weeks.

Since completing the line from San Jose to Kettleman Hills where a portion of the gas flow of Milham's No. 1 Elliott discovery well is utilized, work has progressed rapidly and chances are excellent for completing the entire line on schedule. The line when complete will cost approximately $16,000,000. A paralleling line to supply several northern counties is now under construction and will probably take gas from the Continental Oil Co.'s first producer on the north dome at Kettleman Hills.

CALGARY LINE HELD UP PENDING WINNIPEG LINE

CALGARY, Alta., Nov. 23.—Charles W. Stewart, federal minister of the interior, has announced that no natural gas shall be exported from Canada to the United States, until a complete survey of domestic needs has been made and supplies for that purpose assured. Mr. Stewart has been here for a week investigating the Turner Valley gas supply.

A Montana copper plant offered to lay a pipe line to Calgary to utilize 300,000,-000 feet of gas daily. This proposal cannot be accepted, Mr. Stewart said, until the projected pipe line to Winnipeg backed by British capitalists is definitely abandoned, or until it is certain that there will be enough gas for both projects. At present nearly 500,000,000 feet of gas daily from Turner Valley Field is wasted.

ROWAN AND TONG LINES

Considerable money was spent for offset and nearby acreage, in the vicinity of the Rowan and Tong Pool, Pecos County, and The Texas Company ran a 6-inch line from Crossett to the discovery and intended taking production from the pool, but it seems as if this expense and work had gone for nought unless the Taylor-Link Pool increases in production to such an extent that a third pipe line outlet may be in demand, then the Texas Pipe Line Co. may extend its line 6 miles farther south to take production from that pool. The Landreth Production Co. has an 8-inch into that pool from Crossett, and the Humble Pipe Line Co. has a 6-inch, consequently it is believed that the pool has plenty of pipe line facilities. The combined total daily capacity of these two lines is around 40,-000 bbls., much more than the pool is producing at present, although the future may see these two lines unable to handle the daily production.

MISSOURI-KANSAS SUBSIDIARY

CHICAGO, Nov. 25.—Formation of the Indiana-Kentucky Gas Corp. as a subsidiary of the Missouri-Kansas Pipe Line Co. was announced by its president, Frank P. Parish. Capitalization consists of 1,000 shares of common stock of no par value owned by the Missouri-Kansas company.

STEEL INDUSTRY VIEW OF WINTER OPERATIONS

By B. E. V. Luty

PITTSBURGH, Pa., Nov. 25.—The rate of steel production has decreased slightly more in the past week, being now approximately 70 per cent, measured on the basis of steel ingot capacity, which compares with an average of 85 per cent in October and a high of practically 100 per cent last May.

The decrease may be divided into three parts. One part is a long range decrease, production having been exceptionally high for a time, well above the general trend line. Another part is a seasonal decrease, generally due at about this time of year, and always in evidence in December at least. A third part is ascribable to the break in the stock market. The present rate of production is by no means a low one, from a long range view, as it is approximately equal to the heaviest production in any calendar year prior to 1925, even though it is about 30 per cent under the recent peak rate.

The efforts being made by the administration at Washington to preserve activity are well engineered and undoubtedly will produce substantial results. Railroad executives were first called in conference and are reported to have agreed not to reduce their budgets. Other business men will be gathered in groups.

Up to date the steel trade has merely had a mild slowing down in current orders, probably not of a serious nature.

The steel mills have quite a backlog of business to help their operations during the winter, in connection with rails, fabricated structural steel and freight cars. Rails have been bought earlier than usual, 1,100,000 tons having been ordered on the movement to date, whereas a year ago and two years ago no more than 900,000 tons had been ordered by this time. The individual roads have averaged a little larger tonnage than a years ago, though hardly more than two year ago, though hardly more than two shops are booked very well for from four to six months. Freight car shops have a fair amount of business for four months, in repair work and new cars.

There has been a very great decrease in automobile manufacture, but that was from an altogether exceptional level. Production is always lightest in November and December and this time it will not be very much below the average for these two months in the past few years. Agricultural implement works on the other hand have been running well and current reports are that their operations are going to be increased.

CONTRACT ANNOUNCED FOR NEW BRADFORD LINE

A contract for the construction of 10 miles of new pipe line in the Bradford Field has just been awarded to Sylvester Rich of Bradford by the National Transit Co. The new line will extend from Duke Center in the direction of Kane and will be an additional loop for the National Transit.

The new pipe line will be of 6-inch size. It will be rushed to completion on account of the approach of the winter season, about 100 men being employed on the project.

The new loop was made necessary by the constantly increasing production of crude oil in the Bradford Field and the large gain being made in the traffic of the National Transit through the Duke Center station.

A new pump for the Duke Center station is now in process of construction at the shops of the National Transit Pump & Machine Co.

MECHANICAL PHASES OF UNIT CONTROL

(Continued from Page 40)

would tend to greatly increase the cost of development without bringing in a proportionate increase in returns.

Unit operation or controlled development has been the general practice on the Gulf Coast before there was any thought of curtailment of production and was started not to limit production but rather to minimize the cost of exploration. It has been made more easy of accomplishment, possibly, due to the comparatively few operators and to the fact that most of these operators were large companies.

Virtually all of the newer salt dome fields or salt dome prospects are held either by one company entirely or jointly by two or more. When a company is able to get together a large block individually it does it but when two or more companies are making exploration of the same area they usually try to combine their efforts and share in the returns on an undivided interest basis.

Efforts ordinarily are made by those interested to pool their holdings before production is obtained in order to forestall any charges that there had been an agreement of companies to limit production and conspire to maintain prices. It has been stated that this agreement reached before drilling operations have been started is in no way contrary to Texas law and it is thought that it might also be legally applied to acreage in other states.

The line of production around salt domes is so small and so irregular that it ordinarily is too hazardous for companies to attempt to develop a dome individually basing their operations on competitive demands. It therefore is better for companies to pool their interests and allow one company the right to develop the prospect systematically with regard to choosing locations based on salt dome knowledge.

Examples Cited

In The Oil and Gas Journal of September 29, 1927, page 184, there is an interesting story of how unit control was most beneficial to one Coastal field, and others that might be named at random which have also been made more profitable by this type of operation are Lockport, Calcasieu Parish, Louisiana; Bayou Bouillon, St. Martin Parish, Louisiana; Markham, Matagorda County, Texas; East Hackberry, Calcasieu Parish, Louisiana; Allen Dome, Brazoria County, Texas; Raccoon Bend, Austin County, Texas; Boggy Creek, Anderson and Cherokee Counties, Texas; DeWalt, Fort Bend County, Texas, and Lost Lake, Chambers County, Texas.

These are only a few instances of unit operated fields on the Gulf Coast and in East Central Texas. The Humble Oil & Refining Co. has been one of the chief advocates of unit operation and has taken the lead in this work in many instances, and it now has thousands of acres of jointly owned land in southeast and eastern Texas and in southern Louisiana.

Other companies who have joined in these unit controlled acreage agreements are the Shell Petroleum Corp., Gulf Production Co., Rycade Oil Corp., Vacuum Oil Co., Rio Bravo Oil Co., Mills-Bennett Production Co., Magnolia Petroleum Corp., Calcasieu Oil Co. (owned by Union Sulphur Co.), and the Pure Oil Co., as well as many others, so it will be seen that it is a well-established practice along the Gulf Coast and in other parts of Texas and Louisiana where conditions make such type of operations most favorable.

Oklahoma and Kansas

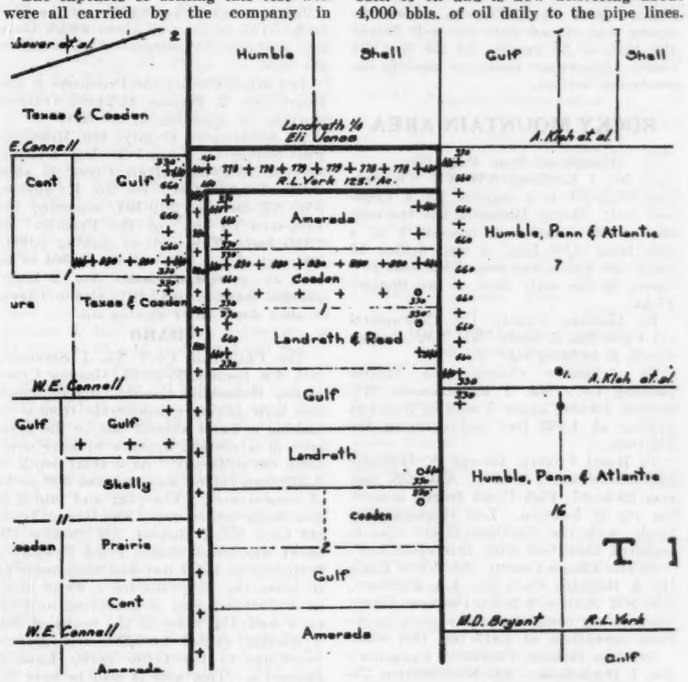
In Oklahoma and Kansas, surveys of lands were as a rule made much more carefully and this type of problem has not been encountered so frequently or with such large vacancies as have existed in Texas, but other conditions have served to bring into agreement all parties interested in the acreage over favorable type structures.

It is understood that quite a large number of agreements have been entered into between the larger companies owning leases on acreage not proven but where the term of the leases was about to expire and it was necessary to drill a test well promptly to check the structure to determine what disposition should be made of the leases.

In such cases it has been found advantageous for one of the larger companies interested to undertake the supervision of all drilling and the land men and geologists have then got together with the production department men and decided upon the location of the test well in addition to other details.

This test well has naturally been located at the place which seemed most advantageous with relation to the type of structure that was mapped as existing underground, and also with the view of proving as much territory as possible by drilling the one test. Also it has been customary to locate the well in one corner of a tract that had two or more direct offset locations belonging to other companies, so that in the event that it did prove a producer the following development could be carried on in an orderly manner.

The expenses of drilling this test well were all carried by the company in charge of the operation, and in this way they were held at a minimum, and then apportioned among the other companies interested in direct relation to their interest in the block under test.



Plat "B," Landreth Production Corp.'s proposed well spacing plan.

If the well proved to be a small producer it was possible to move the greater portion of the drilling outfit that completed the first well over to one of the offset locations and then drill it and then proceed to drill the other one or two remaining offset locations in their order of necessity, and in this way everyone would be able to start production at practically the same time, for each well would be shut in as soon as completed awaiting the finishing of the direct offsets.

Avoid Duplication

This will result in a very considerable saving in doing this work, for as a usual thing, such acreage is some distance removed from supply bases and warehouses, and if three or four companies were each drilling its own wells the expenses for overhead, superintendency, power and miscellaneous supplies and equipment would be duplicated.

If the hole proves to be dry, and in a great many of these tests this has proven to be the case, the acreage is released to the owners and all companies gain by this method of development for they have shared in the drilling of one test well at a minimum of cost in every detail.

This might not be termed strictly unit control operation for it is true that it has been followed mostly upon land where the leases were about to expire and where the geological reports were not of the most encouraging character, but the fact that this method of procedure is being followed indicates that a number of departments of each of several large companies, together with many of the owners of smaller interests, have been getting the benefit of concerted action and that in itself is a step in the right direction.

Real Unit Operation

There are a number of operations that might be classed as strictly "unit controlled pools" and it is variously reported that this type of operation has been applied successfully to 25 or 30 structures. One of the most notable is known as Community Block No. 1, Seminole Pool, Oklahoma, which is being operated by the Carter Oil Co. for several of the major producing companies interested in the area.

This block consists of 640 acres and is located in Sections 10 and 11-9-6 and up to date has produced over 1,000,000 bbls. of oil and is now delivering about 4,000 bbls. of oil daily to the pipe lines.

This unit operation saved the drilling of six tests which in Seminole area represents a saving of approximately $30,000 to $40,000 per well, in addition to allowing an orderly drilling program for the wells needed which resulted in correspondingly straighter holes. This had its beneficial results when the wells were later pumped as it brought about a lowering of production costs.

Work in this particular unit has not yet been under way long enough to permit of a suitable comparison being made between the costs of operating it and other areas of similar character procured under competitive conditions, but everything seems to indicate that there will be many things in favor of the unit controlled acreage. It is proposed to take inventory at the end of this year when a summary of operating costs will be rendered to all companies interested.

The Carter Oil Co. is operating one or two other areas under the unit control plan but none of them is of the size or importance of the Community No. 1 Block in Seminole. But in all cases the saving seems quite apparent and indicates that the idea will be expanded upon further as other opportunities for its application present themselves.

Van Zandt County, Texas

One of the most recently discovered fields where the unit operation plan is suggested as being advantageous is Van Zandt County in East Texas where the Pure Oil Co., Shell Petroleum Corp., The Texas Company, Humble Oil & Refining Co., and other major operators own the lease covering the acreage in the probably productive area and have entered into a unit control type of agreement.

It is understood this agreement is different and rather unique in many of its details compared to the usual type unit control pacts. It is based upon what past experiences of the land men and production departments of these companies interested have found to be good practice in unit control operation.

This recital of some of the accomplishments of the engineer, land man and production superintendents in unit controlled pools recently opened gives some idea of the trend of this movement and it is hoped will serve to indicate what has actually been done.

The American Institute of Mining and Metallurgical Engineers has a committee actively at work collecting and compiling data covering a great number of actual operations that are carried on under unit control conditions and it will report at the February meeting to be held in New York.

It is also anticipated that the American Petroleum Institute in its annual meeting to be held in Chicago next week will devote time to consideration of this problem and out of it all it would seem that there will soon be evolved some very definite rules that will have their application to the various types of problems encountered to the benefit of all who are interested in this industry.

BOYLAN NOW DIRECTOR

David M. Boylan

David M. Boylan, district manager of the General Paint Corp., Hill, Hubbel & Co. Division, with headquarters at Tulsa, has been elected a director of the company. The company is building an addition to its office in Tulsa and also enlarging its warehouse for the storing of raw materials.

FATAL EXPLOSION

SHAWNEE, Okla., Nov. 23.—Carl B. McIntyre, aged 35 years, died here Wednesday from injuries received on an oil lease in the Greater Seminole Field. An engine on which McIntyre was working exploded. He was a World War veteran and a native of Bradford, Pa. McIntyre had worked in oil fields since his boyhood.

ROBERT T. HUSTON DEAD

Robert T. Huston, vice president and superintendent of the Connersville Blower Co., Connersville, Ind., died November 14. He had been connected with the company since its organization in 1893.

OKLAHOMA FIELDS

(Continued from Page 58)

pire, NE cor. SW Section 16-9-6. Tidal Oil Co. and Interocean Oil Co.'s No. 2 Lasley, NW cor. SW SE Section 19-9-6 East Earlsboro Pool, is a cellar. Carter Oil Co. is building the rig for No. 7 Jackson, SE cor. NW NE Section 11-7-6 Little River Pool. Pure Oil Co. is erecting the rig for No. 5 Harjo, NE cor. SW NE Section 11-7-6.

Magnolia Petroleum Co.'s No. 1 Panos, SE cor. NE NE Section 18-9-6 East Earlsboro Pool, has been completed in Wilcox sand 4,388-4,408 feet for 525 bbls. No. 8-A Anderson, NE cor. SW NE Section 18-9-6, had Wilcox sand 4,293-98 feet and made 258 bbls. No. 12 A. Anderson, NE cor. SE NE Section 18-9-6, has been completed for 210 bbls. in Wilcox sand 4,309-26 feet. Amerada Petroleum Corp.'s No. 1 C. Earles, NW cor. SE Section 32-9-6, has been abandoned at 4,413 feet. Continental Oil Co.'s No. 3 Johnson, NW cor. SE NW Section 18-9-7, has been abandoned at 830 feet. Carter Oil Co.'s No. 5 J. Larney, NW cor. Section 24-7-6, made 8,000,000 feet of gas in sand at 3,287 feet after plugging back from 3,323 feet. Independent Oil & Gas Co.'s No. 1 Thloco, NW cor. NE SW Section 9-7-7 East Little River Pool, is dry and abandoned at 4,533 feet. Magnolia Petroleum Co.'s No. 1 Spillman, SE cor. NE SE Section 12-6-7 Sasakwa Pool, made 720 bbls. in Wilcox sand 4,128-31 feet. The Texas Company's No. 1 Lewis SW cor. SE NW Section 13-5-7, has been completed for 595 bbls. in Wilcox sand 4,260-86 feet. The Prairie Oil & Gas Co.'s No. 1 Betsey, NW cor. SW Section 36-6-6, is dry and abandoned at 4,120 feet.

Payne County

Magnolia Petroleum Co.'s No. 2 Grove, SE cor. NW Section 27-19-4, made 10 bbls. in Bartlesville sand 3,393-3,450 feet.

Le Flore County

Le Flore County Gas & Electric Co.'s No. 3 Jackson, SE cor. Section 28-7-26, made 1,250,000 feet of gas in sand 1,524-1,700 feet. No. 92 Fee, NE cor. SE NE Section 19-7-27, has been completed for 879,000 feet of gas in sand 1,410-1,682 feet.

Muskogee County

J. R. Parks' No. 1 Jefferson, SE cor. NE NE SW Section 7-15-15, is rigging up. Babcock Brothers' No. 3 N. Barnett, CEL W half NE Section 8-15-15, is rigging up to deepen from 1,064 feet. C. F. Davis and others' No. 1 Agnew, NW cor. SW SE Section 12-13-18, is drilling at 120 feet. W. F. Sessions and others' No. 1 Pickard, SE cor. SW Section 29-13-19, is a machine. Babcock Brothers' No. 1 N. Barnett, SE cor. SW NE Section 8-15-15, has been completed for 30 bbls. in sand 1,640-47 feet. Wilson & Barnes' No. 2 Kelly, SE cor. NW SW Section 13-13-18, is a dry hole at 735 feet.

Okmulgee County

J. H. Rebold's No. 1 Sugar, NW cor. SW Section 5-15-13, is drilling at 100 feet. Devonian Oil Co.'s No. 1 Jones, SE cor. NW Section 6-15-13, is drilling deeper at 2,599 feet. J. H. Rebold's No. 1 Scott, NW cor. SE Section 6-15-13, is drilling deeper at 2,381 feet. Martin & Eberly's No. 2 Silpee, CSL NE NW NW Section 20-12-13, is drilling at 1,925 feet. J. K. Gardner's No. 1 S. Brinton, C SE SE Section 15-14-13, has been abandoned at 1,978 feet. Elm Oil Co.'s No. 2 A. Lewis, NW cor. SW NE Section 24-14-14, has been completed for 100,000 feet of gas in sand 500-18 feet. J. L. Selby's No. 1-A Flint, SE cor. NE NW Section 26-14-14, made 60 bbls. in sand 954-88 feet.

Sequoyah County

Citizen's Gas Co.'s No. 1 Greenstreet CWL SW SE Section 33-12-27, made 650,000 feet of gas in sand 1,170-1,212 feet.

Stephens County

Medlin and others' No. 1 Brown, CNL S half NW Section 19-2s-7w, is drilling at 1,200 feet. Heydrick and others' No. 1 Glenn, SE cor. SW Section 5-1s-8w, has been abandoned at 2,507 feet. Ven Mex Oil Co. and Mid-Continent Oil Co.'s No. 8 Nigh, SE cor. NE NW Section 34-1s-8w, has been completed for 10 bbls. in sand 2,239-42 feet. Magnolia Petroleum Co.'s No. 6 Marks, NW cor. NE SE Section 13-2s-8w, made 40 bbls. in sand 1,935-40 feet.

Tillman County

Allen Brothers' No. 2 Howell, CSL N half SE Section 13-1-17w, is shut down at 550 feet.

Tulsa County

Union Drilling Co.'s No. 2 Anthis, NE cor. Section 13-19-10, is drilling at 1,100 feet.

Wagoner County

J. E. Martin and others moved a machine in for No. 1-A Berryhill, NE cor. SE Section 27-18-15. J. A. Scherer's No. 1 Posey, NW cor. SE NE Section 5-17-18 is drilling at 800 feet. Creekmore & Morrison's No. 1 Smith, NW cor. Section 28-18-16, is dry and abandoned at 765 feet.

Woodward County

John Farrand's No. 2 Belva, CSL SW SE Section 2-23-17w, has been abandoned at 1,385 feet.

Barnsdall Oil Co.'s No. 1 in the SW cor. NE Section 13-5-7, on the west side of the Allen Pool, found water in the Wilcox sand at 4,260-68 feet. It was plugged back to 2,760 feet, where the casing was ripped and the well flowed 400 bbls. of 25 gravity oil the first 24 hours. Owners are unable to identify the producing horizon.

ROCKY MOUNTAIN AREA

(Continued from Page 62)

Co.'s No. 1 Erickson, SW NE NW Section 33-2n-70, is a location for a 4,000-foot test. Henry Dickason has the contract. The location is one-fourth of a mile from "Old Liz," a well drilled 15 years ago which was one of the best producers in the early days of the Boulder Field.

In Larimer County the Continental Oil Co.'s No. 5 Scott, NE NW Section 6-9-68, is building rig.

In Arapahoe County, the McDeb Drilling Co.'s No. 1 Fitzsimmons, NE Section 7-4s-66, again is making hole and drilling at 4,165 feet and carrying the 6¼-inch.

In Routt County, George A. Gillespie and others' No. 1 Omholt, NW SW Section 29-4n-87, Fish Creek Dome, is moving rig to location. Lou Gorham, formerly with the Continental Oil Co., is reported identified with this operation.

In Rio Blanco County, the White Eagle Oil & Refining Co.'s No. 1-A Fordham, NW SW Section 9-2s-96, Piceance Creek, has new rig completed and expects to resume operations at 2,815 feet this week.

In Mesa County, Parrish & Langston's No. 1 D.&R.G.W., NE NW Section 23-1s-1w, in the city limits of Grand Junction, is reported abandoned at 420 feet with water in the hole.

In Dolores County, the Transcontinental Oil Co.'s No. 1 Glade, C NW Section 30-41-16, is reported drilling at 5,115 feet. The elevation of this well is 8,500 feet and an effort is being made to complete it before cold weather makes a shutdown necessary.

In Moffat County, the Texas Production Co.'s No. 1 Berlin, SE NE Section 19-12n-100, Bartram Dome, is bottomed at 2,055 feet and trying to free the 8⅝-inch, which it was lowering to set on top of the gas sand at 2,002 feet. The Mountain Fuel Supply Co.'s No. 1 Lasher, NE NE Section 25-12-101, and No. 1 Wheeler, NW NW Section 30-12-100, are both shut down after rigging up. All of this company's wells in the Hiawatha area on the Colorado side are shut down. Thomas McLaughlin and others' No. 1 Williams, NW SW Section 2-3n-92, Iles district, is drilling at 4,365 feet, 12 feet in the black shale above the Sundance, which is expected within the next 10 to 20 feet.

WYOMING

The Producers & Refiners Corp.'s No. 1 Muskrat, NW SE SE Section 34-34-92, Fremont County, Wyoming, completed at 4,340 feet a year ago as a 75,000,000-foot gas well, opening a new gas field, is being connected with the New York Oil Co.'s gas line from Sand Draw to Casper and will be put on production. The well is only 2 miles from the line and 4, 4½ and 5-inch pipe is being laid. The Kinney-Coastal Oil Co.'s No. 1 Dykeman, to the northwest on the Pilot Butte Dome in the SE SW Section 22-3n-1w, which came in recently as a 63,000,000-foot gasser, is getting ready to drill deeper. A 120-foot rotary derrick is being erected to replace the smaller rig that was burned. The gas was encountered at 3,370 feet. The plans are to test the several horizons down to the Sundance, the original objective. The Texas Production Co.'s No. 1-A State, SW SW Section 36-34-95, Alkali Butte, is spudding at 30 feet after skidding rig.

In Park County the Midwest Refining Co.'s No. 1 Rosenberg, NE cor. Section 26-58-98, Frannie Dome, which was completed at 2,809 feet in the Tensleep with a production of 95 bbls. a day, and then deepened to 2,825 feet, where it made 263 bbls. natural, continues to improve and flowed and swabbed 548 bbls. in 24 hours one day this week.

Big Sand Draw

The Producers & Refiners' No. 9, SW SW Section 15-32-95, Big Sand Draw, Fremont County, is still bottomed at 2,970 feet and preparing to run the 8¼-inch. This is the well about which there are unconfirmed rumors of oil being in the hole.

In Carbon County the Producers & Refiners' No. 2, Section 11-24-88, O'Brien Springs, is spudding at 90 feet.

In Sweetwater County, the Mountain Fuel Supply Co.'s No. 1 Tucker, NW SE Section 18-13-99, Alkali Creek is shut down at 3,630 feet. Its No. 1 Cappers, SW NE Section 2-19-104, cemented the 13⅜-inch on top of the Frontier at 2,495 feet. This well is making 3,000,000 feet of gas. It will be drilled in as soon as cement hardens. No. 2 Humphreys, Section 10-12-101, Canon Creek, is shut down after rigging up.

IDAHO

The California Co.'s No. 1 Sorensen, NW SW Section 33-3n-41, Meadow Creek Dome, Booneville County, Idaho, which has been having considerable trouble in making a water shutoff due to the presence of a crevice, appears to have overcome the difficulty. At a total depth of 3,550 feet, tubing was run and 300 sacks of cement used. The plug and tubing is now being drilled out. The Grand Teton Oil Co.'s No. 1 Blevins, SW Section 33-5n-44, Horseshoe Dome, Teton County, is bottomed at 1,333 feet and underreaming to lower the 12½-inch for a water shutoff. This company is preparing to deepen a well 1¼ miles to the north of No. 1 Blevins drilled to 1,300 feet several years ago by the Teton Valley Land & Lease Co. This well is said to have encountered some gas which caught fire and burned the rig. A small rig now standing over the hole will be used to go deeper after a water shutoff is made. It will be known as No. 1 Bevan, SE Section 28-5n-44. The Sheppard Oil Field Service, of Idaho Falls, says a new company of which Paul Sevick is president and Judge Ruddick is secrtary-treasurer has made location for a Tertiary test in Cherry Gulch, 8 miles north of Payette, Idaho. Rig is being erected and machinery and materials hauled to location. The geology for the company is reported to have been done by H. L. Welsh, of Billings, Mont. A 20-inch hole will be started and it is anticipated that gas will be reached at from 1,000 to 1,500 feet. About two years ago the Idaho Petroleum Co. obtained a wet gas from a Tertiary sediment at about the same depth as the objective at the Cherry Gulch test.

MONTANA

The Carter Oil Co., drilling on the Six Shooter anticline in Stillwater County, Southern Montana, has a dry hole at 4,360 feet. The well went through the Madison lime and found hot water in the sands. It is now considered by the company that this location is on the wrong side of a fault plane and a new well is to be drilled on the other side of the structure in the spring.

Sunburst had one completion the past week, but this is considered one of great importance. The A. H. Campbell well on Section 3-34-2, found the Ellis sand at 1,535 feet and is making about 30 bbls. daily. This well is located in what has been considered dry hole territory about a mile south of Oilmont and the strike will occasion much wildcatting in the area.

About 60 miles south of the Sunburst Field in Liberty County, the Square Deal Petroleum Co. has a showing of oil near Joplin, at 3,850 feet and the well is now running a string of pipe to make a test of the showing. Interest in this well is high because it is considered this wildcat may be the discovery well for a new pool similar to Sunburst.

Turning to Devonian

Montana oil operators are turning their attention to the Devonian formation as a possible source of oil in this State. The Turner Valley Field in Canada will produce about a million barrels of oil this year besides immense quantities of natural gas and this has led the Montana operators to consider that there may be some oil fields lying to the south of the national boundary. The Rocky Mountain Petroleum Co. is now starting a wildcat on the Teton anticline west of Choteau that will be a test of the Devonian. The Earl Oil Co. is also drilling a similar deep test on this structure and the California Co. is drilling a third deep test to the Devonian on the Crowley Dome near Ringling. This well is at 2,700 feet and the Devonian is expected about 4,500 feet.

The land board has issued 19 permits to prospectors on state lands in Flathead County and granted 10 leases on 2,520 acres of land in Teton, Phillips Beaverhead and Toole Counties. This will bring the State a total of $1,890 revenue.

Pipe Line Runs

Daily average pipe line runs for week ending November 23:

WYOMING	
Salt Creek	30,680
Frannie	690
Big Muddy	2,100
Oregon Basin	4,560
Byron	
Dutton	30
Elk Basin	700
Ferris	40
Grass Creek	1,980
Greybull	10
Hamilton	1,000
LaBarge	2,500
Lance Creek	170
Lost Soldier	3,030
Osage	610
Poison Spider	880
Rock River	2,230
Rex Lake	100
Lander	140
Simpson Ridge	60
Teapot Dome	40
Mule Creek	560
Pilot Butte	
Total	52,110
MONTANA	
Cat Creek	1,260
Kevin-Sunburst	6,800
Pondera	2,400
Lake Basin	70
Total	10,530
COLORADO	
Moffat	1,033
Fort Collins	1,800
Florence	612
Iles	1,098
Tow Creek	425
Boulder	25
Rangely	100
Total	5,093
NEW MEXICO	
Artesia	842
Cap Rock (Maljamar)	415
Hogback	520
Rattlesnake	1,659
Table Mesa	113
Hobbs High	280
Jal	80
Total	3,909
Grand total	71,642

WEST TEXAS FIELDS

(Continued from Page 69)

tion 17, Block 5, and this test will perhaps go to the deeper pay to give it a good testing.

Continental Oil Co.'s No. 2 Sealy, in Section 81, Block A, G.M.M.B.&A. Survey, was abandoned as a dry hole at 3,358 feet after plugging back and shooting, the shot having no results. This test encountered an oil showing at 3,135 feet and a second oil pay from 3,210-15 feet with an increase at 3,230 feet, but these were not sufficient to make a com-

mercial producer. This well is just east of production in the O'Brien Pool in Ward County, several miles north of the Shipley Pool.

Pecos County Wells

Returning to Pecos County, the county of innumerable showings and pools. Cowboy Evans' No. 1 Pecos Valley well was added to the Pecos Valley Pool as a small producer. It is in Section 36, Block 3, H.&T.C. Survey, northwest of the three producers in the pool, and after drilling to 1,562 feet, plugging back and shooting, it finally was completed as a 6-bbl. producer from 1,556 feet.

Another showing in this county, which may be well to mention at this time, was made by the Humble Oil & Refining Co. in its No. 1 Cunningham in Section 34, Block 11, H.&G.N. Survey, 2 miles southwest of the old Rowan and Tong Pool. It encountered 500,000 feet of gas in sandy lime at 879 feet. The well is now drilling below 960 feet with no increase in gas.

Howard-Glasscock Prices

After hearing the discussion of proration of the Howard and Glasscock County Pools at a meeting held in the Blackstone Hotel, Fort Worth, November 22, one would be led to assume a cut in price would soon be announced by the pipe line companies and purchasers of crude in these fields, the cut to apply mainly to the west side. The present price runs 90 cents for 29 to 29.9 gravity crude, increasing 4 cents for each degree above that or running to $1.06 for 33 to 33.9 gravity crude. Several of the representatives of the pipe line companies agreed this should be cut to 88 cents for 29 to 29.9 gravity crude and only 2 cents differential should be paid, or running 90 cents for 30 to 30.9, 92 cents for 31 to 31.9 gravity, 94 cents for 32 to 32.9 gravity and 96 cents for 33 to 33.9 gravity, a cut of 10 cents on the latter gravity. Price of crude below 29 gravity would remain the same. The western side of the field would be mostly affected by this price as it is from this side the higher gravity oil is obtained. Although it is of higher gravity and brings a higher price representatives said it was of lower gasoline content, consequently did not bring as much profit to the companies buying it as did the lower gravity oil from the east side. That argument was advanced as the reason for the pipe line companies taking as much as possible from the east end and letting the west end do without pipe line facilities, and causing production to be cut to 25 per cent on wells in the extreme west end.

Beginning December 1 proration will be the same all over the fields, the new wells and old wells being prorated accordingly. The pipe line companies will announce their crude requirements about 10 days ahead of the new proration period, and the proration allowances will be figured on that basis, the total pipe line outlet not to run over 37,500 bbls. which figure has been established by the Railroad Commission as the daily limit for these fields.

More than one well to each 40 acres was denounced in the meeting, and extra wells will be denied pipe line connections in the future. Two such wells were agreed to be shut down on top of the pay until an offset of one of the companies could be drilled in. Discouraging the practice of drilling more than one well to each 40 acres will react profitably to producers in the field for it will help in curtailing development, where it seems, curtailment is needed and really desired.

The one-half-mile extension well of the Willingham Pool, Fisher County, Cranfill & Reynolds' No. 1 Barrett in Section 199, B.B.B.&C. Survey, produced 343 bbls. of oil in 18 hours. After putting it on the pump it made 366 bbls. of oil and 220 bbls. of water the first 24 hours. Top of the pay in this well is 3,113 feet, total depth 3,116 feet.

The new potential of the Yates Pool shows a gain of 11,919 bbls. on a 12-hour gauge, the previous periods potential showing 2,623,241 bbls. on a 12-hour gauge. More new wells, one of them especially good, is responsible for this increase.

WEST TEXAS COMPLETIONS
Week Ending November 23

Borden County

Louisiana Oil & Refining Co.'s No. 1 Miller, 150 feet from south and 1,320 feet from west of Section 355, Block 97, topped the salt at 1,080 feet, topped the lime at 2,300 feet and was dry and abandoned at 4,011 feet.

Concho County

Jones & Liner's No. 1 Jones, 660 feet from north and west line of Section 1,878, was dry and abandoned at 2,709 feet.

Fisher County

Cranfill & Reynolds' No. 1 Barrett, 330 feet from south and west line of NE, Section 199, Block 1, had an initial production of 125 bbls. oil and 200 bbls. water at 3,113-16 feet. J. H. Riley and others' No. 1 Bloch, located 250 feet from north, 990 feet from west of Section 4, Block 2, was dry and abandoned at 3,300 feet.

Glasscock County

Shell Oil Co.'s No. 1-B Kloh, 330 feet from north and west lines of Section 11, Block 33, Township 3s, was dry and abandoned at 2,547 feet.

Howard County

Continental Oil Co.'s No. 2 Abrams, 2,310 feet from north and 330 feet from east of Section 13, Block 33, Township 2s, T.&P.R.R. Survey, topped the pay at 2,185 feet, was drilled to 2,308 feet, plugged back to 2,265 feet and had an initial production of 175 bbls. in 12 hours. Plymouth Oil Co.'s No. 6 Abrams, 330 feet north and 2,310 feet east of Section 5, Block 32, had 250 bbls. initial at 2,240-2,323 feet. Its No. 7 Abrams, 2,310 feet north and 330 feet west of Section 5, Block 32, Township 2s, had 860 bbls. initial at 2,200-57 feet.

Irion County

Carl Cromwell's No. 1 Nutt, 150 feet from north and 1,160 feet from west of Section 6, had an initial production of 15 bbls. of oil and water at 1,480 feet.

Pecos County

Continental Oil Co.'s No. 4-A University, 330 feet from north and west lines of Section 6, Block 17, had 85 bbls. initial at 960-70 feet. Henshaw Oil Corp.'s No. 1 McDonald, 330 feet from north and west lines of south 109 acres of north 198 acres of Section 2, H.E.&W.T.R.R. Survey, topped the salt at 690 feet, topped the lime at 1,310 feet, was drilled to 1,660 feet and dry and abandoned. Independent and Rowan and Tong's No. 2 McDonald, Section 46, Block 12, was dry and abandoned at 1,662 feet. Landreth Production Corp.'s No. 1 Cunningham, 235 feet from north and 275 feet from east of Section 32, Block 11, topped the salt at 766 feet, was drilled to 1,720 feet and dry and abandoned. Landreth Production Corp.'s No. 8-A University, Section 13, Block 18, location abandoned. Landreth and World Oil Co.'s No. 4-B University, 1,650 feet from north and 330 feet from east of Section 13, Block 18, topped the lime at 1,325 feet, topped the pay at 1,596 feet, was drilled to 1,635 feet and had an initial of 2,548 bbls. Rowan-Tong's No. 1 McDonald, 1,170 feet from north and 2,490 feet from east of Section 46, Block 12, topped the salt at 725 feet, topped the lime at 1,400 feet, topped the pay at 1,605 feet, was drilled to 1,644 feet and was dry and abandoned. The location was abandoned on The Texas Company's No. 2 McDonald, 330 feet from south and 1,863 feet from west of Section 46, Block 12. Tower & McKanna's No. 1 University, Section 14, Block 16, was dry and abandoned at 2,093 feet.

Runnells County

H. D. Hamilton's No. 1 Spill, Section 358, Thomas R. Webb Survey, location abandoned.

Ward County

Continental Oil Co.'s No. 2-A Sealy, 330 feet from south and west of Section 81, Block A, topped the salt at 1,088 feet, topped the lime at 2,280 feet, was shot with 150 quarts at 3,210-55 feet and with 140 quarts at 2,405-25 feet and was dry and abandoned.

Upton County

Texas Pacific Coal & Oil Co.'s No. 15-A Lane, Section 5, G.C.&S.F.R.R. Survey, had 116 bbls. initial at 2,010-63 feet.

PIPE LINE RUNS
November 6 to November 13

Runs Through Trunk Lines

	Last period
Atlantic P. L. Co., Port Arthur, Tex.	37,500
Gulf P. L. Co., to coast via Ranger, Tex.	32,984
Humble P. L. Co., Comyn, Tex.	40,901
Humble P. L. Co., Ingleside, Tex.	51,469
Illinois P. L. Co., Del Rio, Tex.	48,186
Magnolia P. L. Co., De Leon, Tex.	19,339
Pasotex P. L. Co., El Paso, Tex.	7,963
Shell P. L. Co., Healdton, Okla.	41,206
Shell P. L. Co., Houston, Tex.	22,807
Texas Co., Houston, Tex.	32,374
Total	334,729

Tank Car Shipments

Thomas & Brann, Grant City	100
Orient Co., McCamey, Tex.	100
American Pet. Co., Pyote, Tex.	none
Southern Crude O. P. Co., Wickett, Tex.	15,667
Total	15,867

Runs to West Texas Refineries

Amarillo Production Co., Pyote, Tex.	Off
Bluebonnet Ref. Co., Wickett, Tex.	3,058
Burford Ref. Co., Pecos, Tex.	4,136
Col-Tex Ref. Co., Colorado, Tex.	7,500
Cosden Ref. Co., Big Spring, Tex.	5,910
Great Western Ref. Co., Big Spring, Tex.	3,505
Humble Oil & Ref. Co., McCamey, Tex.	none
Mid-Tex Ref. Co., Midland, Tex.	none
Tonkawa Ref. Co., Pyote, Tex.	2,200
Big Spring Ref. Co., Big Spring, Tex.	1,651
Richardson Ref. Co., Big Spring, Tex.	4,462
Wickett Ref. Co., Pyote, Tex.	250
Total	32,672

Summary

	Previous Week	Last Week
Pipe line runs through trunk lines	318,172	334,729
Tank car shipments	13,230	15,867
Runs to West Texas Refineries	42,511	32,672
Total daily distribution	373,913	383,268
Total daily production	364,577	360,546
Daily average from storage	9,336	22,722

WEST TEXAS PRODUCTION
Week Ending November 23

County—	Wells	Bbls.
Crane County	321	34,490
Crockett County	44	1,697
Ector County	4	142
Fisher County	7	1,480
Glasscock-Howard	435	40,950
Jones County	73	2,547
Loving County	15	845
Mitchell County	142	2,670
Pecos County	372	142,947
Reagan County	253	17,145
Runnels County	3	25
Scurry County	5	20
Upton County	244	10,053
Ward County	16	1,850
Winkler County	597	106,290
To.al this week	2,531	363,151
Total last week	2,507	368,080
Difference	24	4,929

PECOS COUNTY
Week Ending November 19

Company, lease—	Wells	Prod.
M. H. Black:		
Fee	1	10
California Co.:		
Yates-lease 1	19	10,206
Smith-lease 1 Sec. 37	4	491
Smith-lease 1 Sec. 23	8	2,500
Smith-lease 1 Sec. 21	5	1,121
Smith-lease 2	3	98
Smith-lease 3	13	2,582
Smith	1	8
Tippett-lease 1	1	30
University	1	81
Continental Oil Co.:		
Yates-A	8	526
Salvage		5,178
University-A	2	435
Cosby Drilling Co.:		
Smith	2	598
Dorn & McGee:		
Pecos Valley	1	23
Grayburg Oil Co.:		
Pecos River Bed	6	54
Salvage		278
Gulf Production Co.:		
All leases	42	18,069
Henshaw Oil Corp.:		
University	1	36
Humble Oil & Refining Co.:		
Smith-A	11	2,074
Smith-B	7	1,096
Kirby Petroleum Co.:		
Tippett	2	61
Kirby Petroleum & Edson:		
Tippett	1	229
Gray	1	10
McCarty Oil Co.:		
Bennett	1	3
McMan Oil & Gas Co.:		
Smith-A	1	1,800
Smith-B	4	1,364
Smith-C	9	942
Tippett	3	401
Richardson	2	169
McMan & Con inental:		
Yates	17	6,185
Mid-Kansas & Transcontinental:		
Yates-A	27	20,914
Yates-B	27	7,201
Salvage		209
Yates-C	11	8,407
Salvage		200
Yates-D	7	8,203
Yates-E	3	920
Yates-F	4	849
Yates-G	3	1,379
Yates-H	10	8,820
Smith	6	2,437
Smith-Taylor	19	4,400
Landreth Production Co.:		
University-A	2	431
University-C	1	1,347
University-D	1	35
Universal-y-G	2	964
University-H	1	24
Landreth & World:		
University-B	3	2,589
J. D. O'Mara:		
Butz	1	12
Pecos Valley Oil:		
Fee, Sec. 22, Blk. 26	2	46
Phillips Petroleum Corp.:		
Monroe	2	169
Ramsey	4	1,007
Smith	3	661
Plymouth Petroleum Corp.:		
Perry	1	31
Red Bank Oil Co.:		
Smith	5	514
Rowan-Tong & Independent:		
McDonald	1	...
Savoy-Mazda:		
Smith	3	594
Shell Petroleum Co.:		
Tippett	11	2,914
Smith	11	1,481
Smith-B	1	679
Smith-D	4	795
Smith-E	1	30
Bower-Universi.y-C	3	433
Simms Oil Co.:		
Smith	7	7,853
Skelly Oil Co.:		
Tippett	2	321
Taylor-Link:		
University	5	509
World Oil Co.:		
University	1	37
Total Pecos Field	372	143,565

DAILY AVERAGE PRODUCTION BY LEASES
WINKLER COUNTY
Week Ending November 19

Company, farm, sec., blk.—	Wells	Prod.
Amerada Petroleum Corp.:		
Cowden 3 B-12	3	42
Atlantic O. P. Co.:		
Hendricks-A 34 B-5	7	2,293
Hendricks-B 44 26	6	642
HendricksD 29 B-5	7	569
Hendricks-E 41 B-5	6	750
Hendricks-G 46 26	7	20
Hendricks-F 40 36	12	810
Bankers Prod. Co.:		
Hendricks 30 B-5	1	...
V. T. Bolin:		
Brown-Altman 4 B-5	1	4
California Co.:		
Hendricks 29 B-5	7	628
Continental Oil Co.:		
Hendricks 33 26	4	665
Hendricks-A 29 26	2	79
Hendricks-B 34 26	2	...
Cranfill & Reynolds:		
Hendricks-A 28 B-5	2	308
Hendricks-B 33 B-5	1	83
Hendricks-C 33 26	2	496
Hendricks-E 33 26	2	212
Cranfill & Texon:		
Hutchings 47 26	2	85
Culberson Bros.:		
Hendricks 40 B-5	1	62
Eastland Oil Co.:		
Hendricks 35 B-5	2	295
Hendricks-B 46 26	1	138
Gulf Production Co.:		
Hendricks-A 34 B-5	13	4,801
Hendricks-B 45 26	11	3,102
Hendricks-C 40 B-5	6	435
Hendricks 44 26	3	493
Cowden 3 B-12	3	109
Humble Oil & Refining Co.:		
Hendricks-A 34 B-5	17	4,479
Hendricks-B 29 B-5	6	2,151
Hendricks-C 32 26	8	518
Hendricks-D 41 26	1	66
Hendricks-B 39 26	3	241
Hendricks-C 10 B-12	13	7,049
Walton-A 48 26	1	103
Independent Oil & Gas Co.:		
Hendricks-A 34 B-5	7	805
Howe-B 44 26	3	145
McCabe 36 B-5	3	142
Vardeman-B 41 B-5	6	339
Lion Oil Co.:		
Hendricks-A 41 B-5	11	2,753
Hendricks-B 34 B-5	13	2,645
Hendricks-C 45 26	14	5,246
Hendricks-D 44 26	1	106
Magnolia Petroleum Co.:		
Hendricks 29 B-5	5	455
May Prod. Co.:		
Hendricks 34 26	1	10
American Maracaibo:		
Hendricks-A 28 B-5	1	27
Hendricks-B 28 B-5	1	34
Mining & Engineering:		
Hendricks 10 B-12	1	...
Murchison & Cranfill:		
Hendricks-A 35 B-5	2	304
Hendricks-B 35 B-5	3	338
Hendricks-C 35 B-5	1	...
Hendricks-H 35 B-5	1	605
Hendricks-I 34 26	1	129
Republic Produc.ion Co.:		
Hendricks-B 26	12	1,324
Hendricks-A 41 B-5	5	87
Prairie Oil & Gas Co.:		
Hendricks 40 26	6	1,448
Cowden 3 B-12	6	1,976
Shell Petroleum Corp.:		
Hendricks-A 45 26	5	481
Hendricks-B 29 B-5	5	2,057
Hendricks-C 29 B-5	7	392
Hendricks-D 41 B-5	3	121
Hendricks-E 40 B-5	3	387
Hendricks-F 46 26	6	246
Hendricks-G 39 26	1	68

(Continued on next Page)

Company, farm—	Location	Wells	Prod.
Shell-Texas Company:			
Cowden-A 3 B-12		6	1,909
Hendricks 45 26		6	2,635
Hendricks-A 29 B-5		7	835
Hendricks-B 40 26		4	231
Hendricks-C 40 26		6	1,463
Hendricks-D 40 26		6	220
Hendricks-E 39 26		2	141
Skelly Oil Co.:			
Hendricks 40 26		12	3,569
Hendricks-B 10 B-12		2	14
Hendricks-C 39 26		1	74
Southern Crude O. P. Co.:			
T-67 Hendricks-A 42 B-5		3	120
T-67 Hendricks-3-A 4 B-12		5	375
T-67 Hendricks-B 44 26		5	301
T-67 Hendricks-3-B 33 26		4	501
T-67 Hendricks-C 33 B-5		5	525
T-67 Hendricks-2-D 27 26		5	1,072
T-67 Hendricks-E 42 B-5		4	111
T-67 Hendricks-F 33 B-5		5	482
T-68 Hendricks-3-A 35 B-5		3	51
T-68 Hendricks-B 46 26		2	160
T-88 Hendricks-A 44 26		6	660
T-88 Hendricks-B 4 B-12		4	180
T-88 Hendricks-C 28 B-5		8	960
T-88 Hendricks-D 4 B-12		5	2,245
T-88 Hendricks-H 28 B-5		6	826
T-88 Hendricks-I 20 B-5		7	494
T-88 Hendricks-J 30 B-5		5	437
T-88 Hendricks-K 41 26		7	1,052
T-88 Hendricks-L 4 B-12		4	304
T-88 Hendricks-M 33 26		33	11,254
T-88 Hendricks-N 28 26		7	1,915
T-88 Hendricks-O 22 26		4	403
T-88 Hendricks-P 28 26		2	292
T-88 Hendricks-Q 27 26		2	821
T-88 Hendricks-R 27 26		3	752
T-88 Hendricks-S 34 26		4	1,569
T-88 Hendricks-T 34 26		7	975
T-88 Hendricks-U 41 26		10	954
T-88 Hendricks-V 29 26		1	73
T-88 Hendricks-W 5 B-12		1	211
T-88 Hendricks-CX 21 26		4	1,049
T-89 Hendricks-A 35 B-5		3	165
T-89 Hendricks-B 35 B-5		2	366
T-89 Hendricks-C 35 B-5		3	365
T-89 Hendricks-D 35 B-5		1	145
T-89 Hendricks-E 40 B-5		3	94
T-89 Hendricks-F 40 B-5		2	189
T-89 Hendricks-H 46 26		2	129
T-89 Hendricks-I 10 B-12		2	56
T-89 Hendricks-J 9 B-12		8	644
T-89 Hendricks-L 15 B-12		2	1,051
T-90 Hutchings 47 26		2	411
Texon Oil & Land Co.:			
Hendricks-A 41 B-5		6	72
Hendricks-B 45 26		6	1,600
Total Hendricks Pool		564	101,852
Leck Area			
Atlantic Kesslar & Logan:			
Leck 3 74		2	127
Amerada Petroleum Corp.:			
Leck 3 74		2	265
Empire Gas & Fuel Co.:			
Daugherty 3 74		3	149
Magnolia Petroleum Co.:			
Scarborough 1 C-22		2	170
Gulf Production Co.:			
Scarborough 1 C-22		1	60
Daugherty 3 74		1	624
Shell-Llano Oil Co.:			
Daugherty 1 C-22		5	352
Shell-Danciger:			
Daugherty 3 74		2	66
Skelly Oil Co.:			
Daugherty 2 16		4	1,157
Tidal Oil Co.:			
Scarborough 1 C-22		1	94
Prairie Oil & Gas Co.:			
Leck 16 74		1	470
Daugherty 3 74		1	139
Scarborough 1 C-22		1	62
Warner-Quinlan:			
Leck 3 74		1	468
		27	4,203
O'Brien Pool			
Continental:			
Morton-A 10 B-12		1	71
Morton-B 10 B-12		2	112
Wentz Oil Corp.:			
Morton 10 B-12		1	131
Simms Oil Co.:			
Sealy 50 F		1	31
Richardson et al:			
Stockton 50 F		1	60
Total O'Brien Pool		6	405
Grand Total Winkler County		597	106,460

PANHANDLE FIELDS

(Continued from Page 70)

Scherle's No. 1 Hughes was dry and abandoned at 1,315 feet.

Montague County

Carter & Rycade's No. 10 Cunningham had 25 bbls. initial at 920-25 feet. Conoco's No. 25 Howard had 34 bbls. initial at 1,017-21 feet. Conoco & Bridwell's No. 1 Cunningham had 54 bbls. initial at 1,113-15 feet. George Pace's No. 1 Cobb was dry and abandoned at 1,902 feet.

RANGER DISTRICT
Week Ending November 23
Brown County

Bearman and others' No. 7 Miller topped the pay at 1,078 feet, was drilled to 1,089 feet, shot with 20 quarts and had 20 bbls. initial. Crabb & McNeil's No. 6 Ellsberry topped the pay at 1,408 feet, was shot with 15 quarts at 1,408-15 feet and had 25 bbls. initial. Gilman-McMurray and others' No. 21 Teston had 8 bbls. initial at 1,229-45 feet. E. L. Smith Oil Co.'s No. 2 Kessler had an oil show at 1,315 feet and was dry and abandoned at 1,320 feet. Stout, Crabb & McNeil's No. 1 Gaines was dry and abandoned at 2,460 feet. Young Brothers, Alexander and others' No. 13 Kilgore Brothers was dry and abandoned at 1,350 feet.

Coleman County

Gutzman & Aldrich's No. 1 Haas topped the pay at 1,477 feet, was drilled to a total depth of 1,483 feet and had an initial production of 7,633,000 feet. McDonald, Campbell & Gwinnup's No. 1 Rohn was dry and abandoned at 2,213 feet. Tower & McKanna's No. 8 Crowder topped the pay at 1,990 feet, was drilled to 2,020 feet, was shot with 20 quarts at that depth and had 150 bbls. initial.

Comanche County

Sun Oil Co. and others' No. 1 Bryson was dry and abandoned at 3,135 feet.

Eastland County

Gholson and others' No. 3 Fox had an oil show at 1,108 feet, was drilled to 1,122 feet, made 3 bbls. of oil and was dry and abandoned. Transcontinental Oil Co. and others' No. 1 Holland topped the pay at 3,750 feet, was shot with 120 quarts in sand at 3,750-4,035 feet and had an initial production of 1,296,000 feet of gas.

Palo Pinto

Prairie Oil & Gas Co.'s No. 1 Carter was dry and abandoned at 2,315 feet. Texas Pacific Coal & Oil Co.'s No. 162 Stuart & Son had an oil show at 1,595-1,608 feet, was shot with 10 quarts, had 12 bbls. initial, and was drilled to 1,612 feet. Thomas and others' No. 1 Satterfield was shot with 30 quarts at 3,418-29 feet, drilled to 3,429 feet and had an initial production of 1,500,000 feet of gas.

Stephens County

Grace and others' No. 1 Allison was dry and abandoned at 2,029 feet after encountering an oil show at 1,885-1,945 feet. Pace & Ward's No. 4 Norton was drilled to 3,323 feet, topped the pay at 3,237-3,307 feet and had an initial production of 1,750,000 feet of gas and 5 bbls. of oil. Lone Star Gas Co.'s No. 2 Callaway topped the pay at 2,093 feet, was drilled to 2,150 feet and had an initial production of 2,193,000 feet of gas.

Shackelford County

Big State Oil Co.'s No. 14 Russ-Webb had an oil show at 772-76 feet, and another oil show at 800-15 feet and 938-42 feet, was shot with 10 quarts from 800-15 feet and made 3 bbls. and was then dry and abandoned. Hart & Gist's No. 1 Clark made 30 bbls. at 680-83 feet. Merry Brothers & Perini and Tidal Oil Co.'s No. 1 Davis was dry and abandoned at 1,580 feet. Tannehill Oil Co.'s No. 27 Newhall had 15 bbls. initial at 914-65 feet and was drilled to 977 feet. Texas Consolidated Oil Co.'s No. 4-B Reynolds had 7 bbls. initial at 948-57 feet.

PANHANDLE COMPLETIONS
Week Ending November 23
Carson County

Reynolds and others' No. 2 Cooper, Section 5, Block 9, I.&G.N.R.R. Survey, was drilled to 3,125 feet, shot with 600 quarts from 3,030-3,120 feet and had 300 bbls. initial. Ryan-Consolidated Oil Co.'s No. 6 Block, Section 111, Block 4, I.&G.N.R.R. Survey, topped the pay at 3,027 feet, drilled to 3,102 feet, shot with 120 quarts at 3,027-80 feet and had 200 bbls. initial.

Gray County

Skelly Oil Co.'s No. 1-A Chapman, Section 69, Block 25, H.&G.N.R.R. Survey, topped the pay at 2,793 feet, was drilled to 2,808 feet and had 600 bbls. initial. Operators Oil Co.'s No. 8 Cook-Faulkner, Section 30, Block B-2, H.&G.N.R.R. Survey, topped the pay at 2,810 feet, drilled to 2,812 feet and had 2,970 bbls. initial with 40,000,000 feet of gas. Skelly Oil Co.'s No. 5 Jackson, Section 90, Block B-2, H.&G.N.R.R. Survey, topped the pay at 2,920-3,015 feet, drilled to 3,055 feet and had 500 bbls. initial. Humble Oil & Refining Co.'s No. 3 Jackson, Section 90, Block B-2, H.&G.N.R.R. Survey, topped the pay at 2,943 feet, drilled to 3,050 feet and had 985 bbls. initial. Magnolia Petroleum Co.'s No. 2 Wright, Section 13, Block 3, I.&G.N.R.R. Survey, was drilled to 2,787 feet, swabbed 410 bbls. the first 24 hours and flowed 390 bbls. the second 24 hours.

Wheeler County

Lone Star Gas Co.'s No. 1 Hicks made 19,000,000 feet of gas at 1,850-2,002 feet. Staley & Wynne's No. 1 Hicks, Section 53, Block 17, H.&G.N.R.R. Survey, topped the pay at 1,705 feet, was drilled to 1,940 feet and had an initial production of 8,000,000 feet of gas. Upham Gas Co.'s No. 6 Gooch, Section 81, Block 23, H.&G.N.R.R. Survey, had an initial production of 40,000,000 feet of gas at 1,488-1,592 feet.

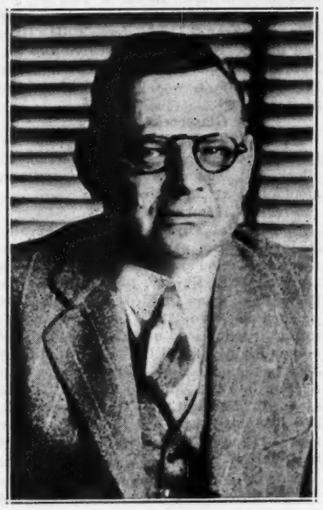
PETROLEUM ACCOUNTANTS SOCIETY OF OKLAHOMA ORGANIZED AT TULSA

A recently formed society, the Petroleum Accountants Society of Oklahoma, held one of its most enthusiastic meetings Thursday, November 21, at the Mayo Hotel. At this meeting announcement was made of the new officers chosen by the board of directors for the ensuing year. A. B. Chesebro, of the Carter Oil Co. was elected president, L. D. Messner, of the Barnsdall Oil Co., vice president, and D. B. Catterlin, of the Gypsy Oil Co., secretary-treasurer. The following members comprise the board of directors: D. B. Catterlin, Gypsy Oil Co., A. B. Chesebro, Carter Oil Co., L. D. Messner, Barnsdall Oil Co., H. G. Humphreys, Skelly Oil Co., E. C. Stewart, Twin State Oil Co., Charles F. Smith, Chestnut & Smith Corp., M. H. Massey, Independent Oil & Gas Co., and E. A. Titsworth, Prairie Oil & Gas Co.

The Petroleum Accountants Society of Oklahoma was organized in January, 1929, and is patterned after the Petroleum Accountants Society of California, which organization has achieved remarkable success on the Pacific Coast. Uniformity in the application of true accounting principles is the main purpose for which the society was formed. For the accomplishment of this purpose, those in charge of various accounting functions of oil companies are invited to join the society, and if, as members, they will contribute of their time, knowledge and experience in the spirit of give and take, success will surely crown the efforts of the society.

The principal topic of last Thursday's meeting was the reading of a paper on "Refinery Cost Accounting for Skimming and Cracking Plants," presented by C. E. Votrain of the Barnsdall companies. Mr. Votrain, who is chairman of the society's committee on Refinery Cost Accounting, led the discussion. The committee in its paper proposed the adoption of the "single product method" of costs for skimming and cracking refineries. This method applies all the costs to the one principal product, which is gasoline. All other products are considered by-products, and the proceeds realized from the sale of such by-products are applied as a reduction of the refining cost of the gasoline. The society listened to several arguments by members who are well acquainted with refinery costs, and while no definite stand was taken on any particular method, the ultimate adoption of a uniform and standard method is confidently looked for. To further this purpose, President Chesebro designated the committee on Refinery Cost Accounting as a committee to work with the subcommittee of the American Petroleum Institute on Uniform Oil Accounting.

The time take up on refinery cost accounting prevented the society getting to the paper on "Control of Plant Equipment and Material Supplies," but this paper will be discussed at the next meeting, which is scheduled for Thursday, December 19. At the December meeting also, answers to about 20 questions pertaining to technical phases of oil accounting will be heard. These questions were assigned to various members of the society for the purpose of getting before the society as a body the opinions of the individual members on the subjects assigned them, with the view of arousing discussion and bringing to light new thoughts or ideas.



A. B. Chesebro

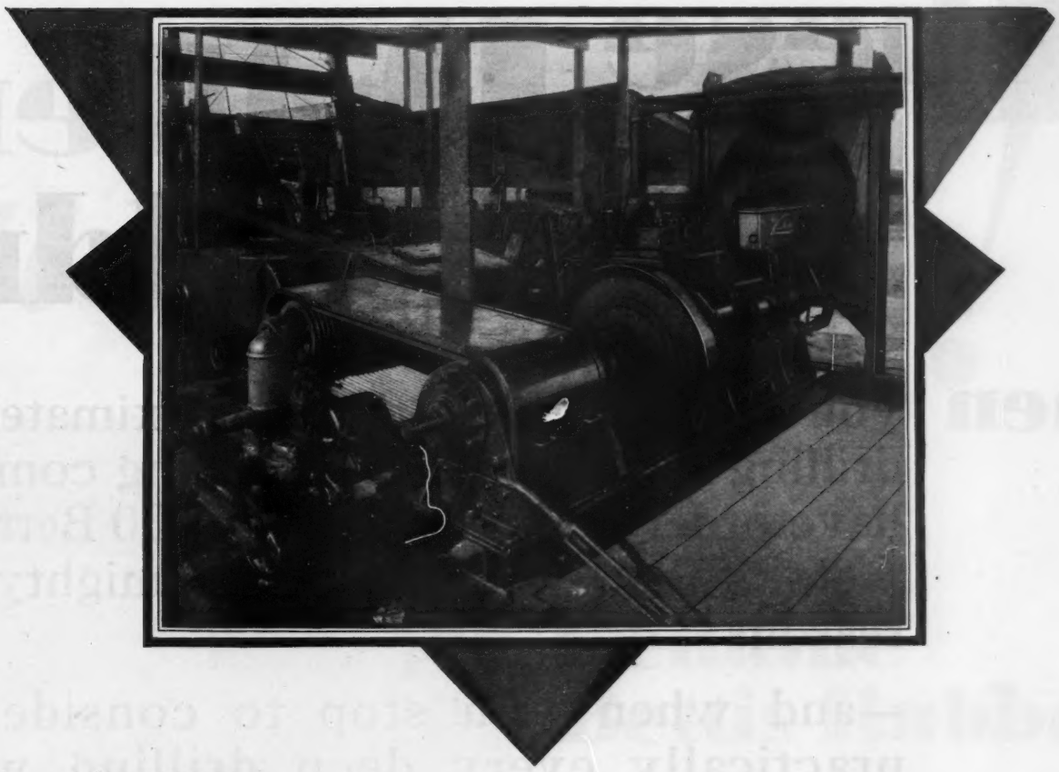
On account of the fact that there are quite a few members in Bartlesville and Independence who find it difficult to attend the meetings in Tulsa, the society voted to hold one meeting in Bartlesville and one in Independence during the ensuing year.

NORTH TEXAS PRODUCTION
Week Ending November 23

Panhandle district—	Bbls.
Carson County	9,625
Hutchinson County	27,024
Gray County	64,305
Moore County	830
Potter County	55
Wheeler County	700
Total this week	102,539
Total last week	100,015
Increase	2,524
Wichita district—	
Archer County	18,472
Baylor County	85
Clay County	848
Cooke County	8,553
Foard County	215
Jack County	3,725
Haskell County	112
Montague County	6,336
Throckmorton County	612
Wilbarger County	29,533
Young County	7,265
Wichita County	25,931
Total this week	101,688
Total last week	102,224
Decrease	536
Ranger district—	
Brown County	10,523
Callahan County	3,405
Coleman County	6,498
Comanche County	1,243
Palo Pinto County	548
Eastland County	5,305
Shackelford County	9,469
Stephens County	6,315
Total this week	43,306
Total last week	43,871
Decrease	565
Grand total this week	247,533
Grand total last week	246,110
Increase	1,423

NEW VENEZUELA SHIPMENTS

The year 1930 will be an important one in the history of the Venezuela oil fields, says O'Shaughnessy's South American reports. From present indications, three light oil fields and one heavy will be added to the shipping list. None of these fields will be subject to competitive drilling as each is located in large area owned by one company. The fields are: Tarra Field, Urumaco Field, Quiriquire Field, Menecity-El Mene Field.



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Interesting details are given in Bulletin No. 775. Write *Oil Field Equipment Division, Waukesha Motor Company, Waukesha, Wisconsin. Offices: New York, 8 West 40th Street; San Francisco, 7 Front Street. In the Oil Fields: C. F. Camp Co., Tulsa; Portable Rig Co., Houston; Bradford Supply Co., Bradford, Pa.*

981

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—and when you stop to consider that practically every deep drilling well is Bettis-protected

—and when you realize that deeper wells are being drilled with less difficulty than in previous years

—and when you study the performance records of Bettis Protectors and consult with the actual drillers in the field

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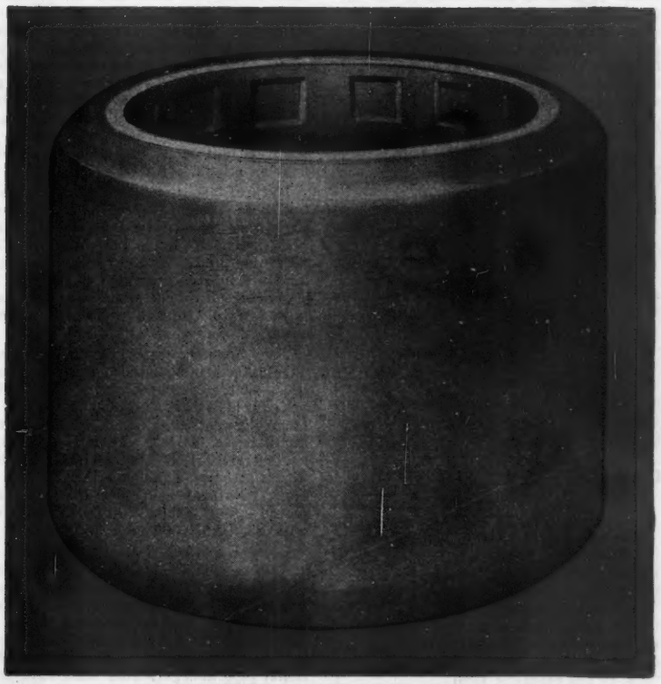

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Natural Gas Developments

CITY ASKS INJUNCTION TO COMPEL GAS SERVICE

FRANKFORT, Ky., Nov. 25.—The State Court of Appeals is asked to extend a temporary injunction to prevent the Union Light, Heat & Power Co. from discontinuing its gas service in the city of Ludlow, in a motion filed on behalf of the city.

According to the motion, the Union Light, Heat & Power Co. had a franchise to supply gas to the city of Ludlow, its residents and consumers, which expired in August, 1929. After the city of Ludlow had enacted a new franchise ordinance but had rejected the bid of the Union Light, Heat & Power Co. on the grounds that the city considered the bid excessive, the company gave notice that on a date in August it would discontinue its supply of gas to the city.

The city then sought a permanent injunction against the gas company and for a declaration of rights. The lower court refused the temporary injunction, but upon appeal to the Court of Appeals a temporary injunction was issued for 60 days. The city of Ludlow now asks the appellate court to extend the temporary injunction pending the appeal on the permanent injunction. The city of Ludlow and its citizens will be without gas because the gas company will undoubtedly turn off the gas unless enjoined from doing so, the motion for an extended injunction said.

The city of Ludlow also filed a motion to set its case against the gas company for oral argument and to advance it on the docket. Three questions are involved in the case, this motion says. They are:

"Has the city council of the city of Ludlow the right to fix the rate at which service should be rendered, and if such rate is unfair and unequitable, is not the burden upon the gas company to show that such rate is unfair and unequitable and make a proper application to the court for that purpose?

"Has the Railroad Commission in the State of Kentucky jurisdiction to fix an equitable rate between the parties?

"Has the Union Light, Heat & Power Co. the right to withdraw its service pending the fixing of an equitable rate?"

CANADIAN GAS OUTPUT

CHATHAM, Ontario, Nov. 23.—According to a report issued by the Dominion Bureau of Statistics, natural gas production in Ontario has been decreasing in recent years, and consumption is being confined to domestic use. In Alberta, however, its use has increased rather than diminished. Natural gas has been discovered in the southern part of Alberta in almost inexhaustible quantities, and its superiority over manufactured gas with regard to heating qualities makes it a very efficient as well as cheap fuel.

GAS SERVICE IN ILLINOIS

Some 5,470,200 persons in Illinois now have gas service available for their use. Although third in population in the United States, Illinois ranks second in the extent of its gas service, more than half the population of the State living in areas having gas service available.

NATURAL GAS LEADS FUELS

Natural gas led the fuel field in 1928 in percentage increase over the 1927 record, according to a report of the Standard Statistics Co. The estimated value of this fuel consumed in 1928 was about 14 per cent greater than in 1927. Manufactured gas followed with an increase of 3.8 per cent, surpassing all other fuels in percentage of increase.

EFFECT OF MIXING GAS ON SALES AND NATURAL GAS PRODUCTION

By V. A. Ogilvie

Chief Engineer, Dominion Natural Gas Co., Ltd., Buffalo, N. Y.*

For several years the natural gas industry has been forecasting inadequate gas production from natural declines to meet increased demands. Some companies in the United States have been extremely fortunate in discovering production sufficient to defer their programs for an augmented supply. However, the situation in Ontario is somewhat different.

The producing companies will continue to discover and open new territory but there is no evidence of the discovery of sufficient new natural gas production to change the general complexion of the production situation and not enough to disturb the market price or retard the plans of the larger companies for maintaining an adequate supply in the future with mixed gas.

In my opinion the natural gas supply will gradually fail to meet the demand and the next logical step is to prepare for mixing natural gas with manufactured gas using the natural gas as an enricher. Anyone who analyzes the statistics available does not need to stretch his imagination to forecast what is in sight for the future in the gas business even in Ontario. The demand for gas as a fuel for hundreds of appliances is increasing so rapidly that the aggressive companies cannot afford to sit by and allow these markets to vanish because of the need for more gas. We must be prepared to meet our future demands.

The question arises as to just when the natural gas company should change to a mixed gas. It seems to be a matter of economics, good judgment and a careful analysis of the local situation. Some companies in the United States have erred in this matter as they delayed augmenting their natural gas supply to their own detriment. They failed to provide adequate service, increased their rates, which decreased their sales, and lost customers together with their good will and respect. Then when their business was in a demoralized and unhealthy condition they resorted to a mixed gas supply. They found it was necessary to rebuild their sales at high costs and the rates were still too high to attract the business previously lost.

In direct contrast, the more aggressive companies are augmenting their declining natural gas supply before the critical point is reached. In other words, a delay in the mixing program may mean a shorter period for mixing gas using the natural gas an an enricher to maintain a high heating value. Experience has shown that the companies changing abruptly from a 1,000 B.t.u. gas to an 800 B.t.u. mixed gas have had less trouble than those which have been forced to change from a 1,000 B.t.u. gas to a 600 B.t.u. gas under the same rate conditions. The reasons are obvious. Normally, in these mixed gas situations, experience has shown that the consumption varies inversely as the heating value. Therefore, a company contemplating a mixed gas in order to maintain a healthy condition should plan to decrease its heating value as little as possible to begin with and gradually decrease the B.t.u. thereafter in accordance with its ability to hold a high B.t.u., depending upon its available natural gas as an enriching agent.

We have found that in the beginning of a mixed gas program there is a recovery of the natural gas supply. As an example, a natural gas field which normally produced 25 per cent of its open flow available, when used as an enricher on mixed gas showed a substantial increase in rock pressure and was able to produce more gas at peak demands than before.

This is a natural condition and conclusive. The degree of this reviving of the natural gas available naturally depends upon the character of the producing sands and other local conditions.

I cite this example to show not only the apparent effect upon the producing fields, but to show the value of natural gas as an enricher. Natural gas is just as valuable, if not more valuable, as an enricher than it is where used in its natural state. The companies changing to a mixed gas with lower heating value are getting closer to competition with other fuels and they should be prepared to meet this competition gradually rather than suddenly to maintain their healthy condition.

In the adoption of a mixed gas we need not fear any unpleasant reactions from the customers. The average customer wants plenty of gas and wants it when he wants it. He would rather have mixed gas all the time than natural gas during off peak periods. Experience has shown that the companies have fewer complaints, are able to give better satisfaction and service with mixed gas than with a shortage of natural gas. The customer is used to the convenience of natural gas, realizes its value in comparison with other fuels, and a mixed gas gives him better service, equal convenience and a reliable fuel which can and will be able to compete with other fuels on any basis in the future.

*Before Natural Gas and Petroleum Association of Canada at London, Ontario.

GAS INDUSTRY SPENDS $450,000,000 A YEAR

The gas industry of America is spending $450,000,000 this year to meet steadily growing demands for service and to carry out expansions of service facilities. The invested capital in the American gas industry by January 1, 1930, is expected to approximate $5,150,000,000, an increase of 25 per cent over total investment in gas plants in 1926.

MUSKEGON SUPPLY DWINDLES

MUSKEGON, Mich., Nov. 23.—Domestic and industrial customers who have been using natural gas from the Muskegon Field for 12 or 14 months have been warned that they might expect a changeover to manufactured gas or coal within six weeks or less. Threatened complete exhaustion of dry gas wells in the Dundee formation by the rapid encroachment of salt water and dissipation of gas pressure was the cause for the warning issued by the West Michigan Consumers and the Muskegon Traction & Lighting Co. Rock pressure in all gas wells in the field has dropped from about 900 to 920 initial to 100 to 110 pounds. All Dundee gas wells on the West Michigan Consumers Co.'s line are wide open and practically all of them are making some water.

The West Michigan Consumers Co. will still have available about 800,000 feet a day of casinghead gas from upper Traverse oil wells. It also has one lower Traverse gas well which may be counted upon for another 700,000 feet a day at least for some time. From 500,000 to 1,000,000 feet from Dundee oil wells and not more than 500,000 feet from some lower Traverse oil wells may bring the possible maximum available of the company to 2,500,000 feet a day.

COLUMBIAN CARBON CO. BUYS RIVER FUEL STOCK

Columbian Carbon Co. has purchased for cash 111,492 shares of capital stock of Mississippi River Fuel Corp. The latter company, in which Standard Oil Co. of New Jersey, United Carbon Co., Electric Bond & Share Co. and United Gas Co. also have an interest, owns the pipe line project for delivery of natural gas from Monroe and Richland Parish fields in Louisiana to St. Louis. In August it offered $16,000,000 of 6 per cent first mortgage bonds publicly, in addition to which it has authorized capital stock of 1,000,000 shares, of which 652,000 are outstanding.

In Federal Fuel Corp. the Columbian Carbon Co. has acquired 1,020 shares of cash, besides an additional 41,807 shares of Interstate Natural Gas Co., Inc., subsidiary of Standard Oil of New Jersey. The former purchase represents 51 per cent of the capital stock of Federal Fuel Corp., which owns unproven oil and gas leases aggregating approximately 135,000 acres. Columbian has also acquired certain undivided interests, equivalent to about 15,000 acres, in oil and gas leases held by others.

Natural gas acreage of the company has been increased from 150,193 acres early this year to 165,256 acres, located principally in Louisiana, Texas, West Virginia and Wyoming, with small amounts in Kentucky and Oklahoma. Its producing oil or gas wells have increased from 387 to 416, and wells drilling from 11 to 12.

The company estimates it will produce 100,000,000 pounds of carbon black this year, compared with 79,194,473 pounds in 1928; 18,000,000 pounds of other pigments, against 3,204,998 pounds in 1928; 25,000,000 gallons of gasoline, against 11,951,339; 49,000,000,000 feet of natural gas, against 47,112,301,000 in 1928. Natural gas sales this year are placed at 27,000,000,000 feet, compared with 25,304,073,000 feet last year.

Several additional units have been or are being added to the company's carbon black plants in Texas, at Lefors, Kings Mill, Magic City, Borger and Lela. Construction of natural gasoline plant at Alto, La., is approximately half completed. Approximately 25 miles of additional pipe and gathering lines have been installed.

Listing of an additional 41,161 shares of no-par capital stock on New York Stock Exchange is to provide for recent offering of rights to stockholders of record October 18, to subscribe at $175 a share in the ratio of nine shares for each 100 held. Expiration date for these rights was extended to March 11, 1930. Out of the 500,000 shares authorized there are 457,344 shares outstanding. There is no funded debt or preferred stock.

GAS IN ELECTRIC PLANTS

A significant feature of the recent growth in sales of the natural gas industry has been the increase in the amount of this fuel taken by electric generating plants. It is reported by the United States Geological Survey that public utility companies used 77,326,000,000 feet of natural gas for generation of electricity last year, or 23 per cent more than in 1927.

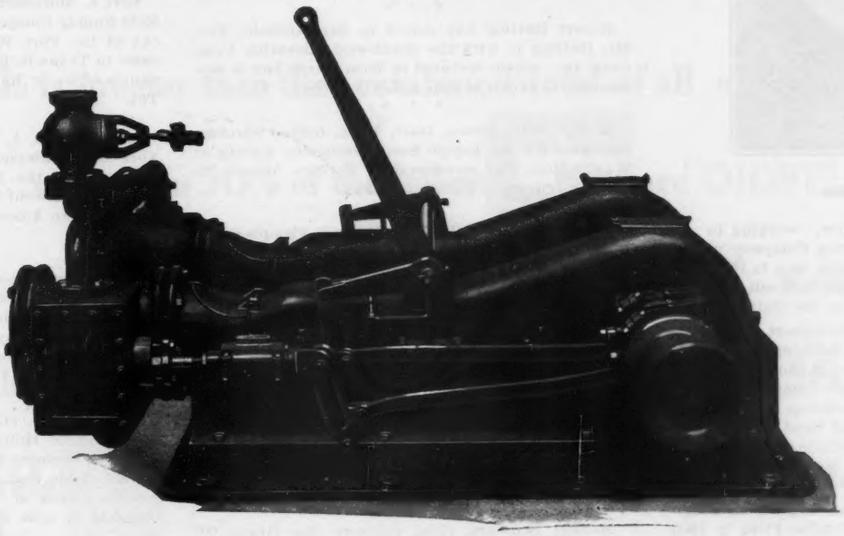
SYNTHETIC RUBBER FROM GAS

Medicines, perfumes and dyes have long been made from the by-products of gas. To these must be added a new synthetic rubber, according to a recent report from Germany.

48½%

OF ALL ENGINES IN OKLAHOMA CITY FIELD ARE

"GUMBO BUSTERS"



A recent survey of the new Oklahoma City field, where highest steam pressures are needed and severest drilling conditions are encountered, shows that 48½% of all the engines in use are "Gumbo Busters."

The "Gumbo Buster" 12″ x 12″ Twin Cylinder Drilling Engine with flat slide valves prevents wet steam from injuring steam end of engine for this type of valve unseats while the piston valve will not unseat when a shot of water strikes it. This eliminates the necessity of heavy steam traps, etc.

This is the first engine to be enclosed. Working parts run in a bath of oil insuring constant lubrication. Dirt cannot get into parts.

This heavy forged one piece double-throw crankshaft is fully supported, positively reducing whip and vibration. Outside valve rigging is protected and easily adjusted or repaired.

By attaching regular flywheel engine can operate in emergency on one cylinder. This feature may prevent the loss of a well should one cylinder break down while the drill pipe is in the hole.

For over forty years the manufacturers of this engine have been producing the best of oil field rotary equipment. The figure shown in the survey above tells you that *48½% of the contractors in this field can't be wrong.*

Write today for details on this light weight, compact and economically operated engine.

Republic Supply Company

OIL AND GAS WELL SUPPLIES

Cable and Rotary Tools

GENERAL OFFICES: HOUSTON, TEXAS

MEN KNOWN IN OILDOM

J. M. Charlton

Although a "land lubber" now, working in the land department of the California Company in Dallas, Tex., one of the best known men in the oil industry in that State once was an "old salt," holding the rating of fireman on a tug on the Gulf Coast.

J. M. Charlton, known throughout Texas as Jimmie, started with the Burt Refining Company in Beaumont, Tex. His first job in the oil industry was checking material with this company in 1902. The next year he went to Spindletop, when the big boom was on in that field, and fired a boiler. In 1904 he went with the Gulf Refining Company. It was here that he acquired "sea legs" firing on a tug operated by the company.

Mr. Charlton also received his degrees in roughnecking and tool dressing at Humble Field in 1905. He learned much about drilling wells and the production department, but the following year found him in the engineering department of The Texas Company working on the survey from Sour Lake to Paris, Tex., and Oklahoma.

He was with The Texas Company before the Ranger boom struck West Texas, and when the first shallow pool was discovered in Palo Pinto County. He was later in the scouting and leasing department of the Humble Oil & Refining Company when the Ranger boom was at its height. The Electra boom also caught Jimmie in the scouting and leasing department of The Texas Company, and when West Texas first struck oil in the Mitchell County Field he was sent to Sweetwater, where he remained five years with the Gulf Production Company.

In 1924 Mr. Charlton joined the California Company which opened district offices in Colorado, Tex., and when the company moved its offices to Dallas, Mr. Charlton moved into that city.

Few oil booms in Texas were missed by Mr. Charlton, for he has been in that State, in the oil industry for 27 years, and has worked in practically all departments with the different companies. He was born in Beaumont, Tex., which later had a big oil boom.

PERSONAL PARAGRAPHS

R. T. Anderson, of Whittier, Calif., is in Hastings, Neb.

* * *

Dr. W. N. Kuiper, of Holland, is now in Tampico, Mexico.

* * *

A. V. Raplee has moved from Tescott, Kans., to Nacogdoches, Tex.

* * *

Alton D. Adams, Massachusetts engineer, has been visiting in Texarkana, Tex.

* * *

F. J. Wolfe, director in charge of sales for Imperial Oil, Ltd., for the past seven years, has been elected a vice president of the company.

* * *

R. E. Collom, general manager of Continental Oil Company's California subsidiary, is recovering after a serious illness of more than six weeks.

* * *

Fred Dallas, formerly superintendent of production for Rycade Oil Corporation, Houston, Tex., is now with the Kirby Petroleum Company in the same capacity.

* * *

J. W. Horn, of the scouting and lease department of the Gulf Production Company, working out of Baton Rouge, La., has been transferred to the Brenham, Tex., district.

* * *

T. W. Horn, Houston, Tex., oil operator, has returned from an extended vacation trip to Ohio and other eastern points. He was accompanied by his family, traveling by automobile.

* * *

Robert Barling has moved to San Antonio, Tex. Mr. Barling is with the Southwest Elevation Company, Inc., which operated in West Texas and is now opening an office in San Antonio.

* * *

R. W. (Bob) Mason, Hart, Mich., retired purchasing agent for the Joseph Seep Purchasing Agency at Washington, Pa., accompanied by Mrs. Mason, is visiting friends in Pittsburgh, Pa.

* * *

E. F. Wheland, F. H. Daniels, G. E. Campbell and R. E. Shaffer, officials of the Chattanooga manufacturing plant of the Lucey Products Corporation, are touring Oklahoma and Texas fields.

* * *

J. A. Whitson of the land department of the Arkansas Natural Gas Company, with offices at Shreveport, La., has recently been in Southwest Texas where the company has some operations.

* * *

Herbert MacMillan, sales engineer for Hazard Wire Rope Company, accompanied by W. W. Runkle, Fort Worth representative, was in Tulsa last week. They are making a tour of the Mid-Continent fields.

* * *

Melbert Schwarz, chief engineer Rio Bravo Oil Company, Houston, Tex., is spending several weeks in California where he has been sent by his company to make a study of production methods in fields of that state.

* * *

Fred W. Fraley, Jr., of the Gulf Coast Chemical Company, Houston, Tex., has returned from a trip on which he visited every refinery in the five southwestern states, including, Texas, Louisiana, Arkansas, Oklahoma and Kansas.

* * *

P. M. Miskell, W. H. Merritt, C. A. Willis, H. W. Camp, O. J. Tuttle, Charles Self and H. S. Pettingill of Tulsa have been attending a meeting in Toronto, Canada, of the executives of all oil marketing subsidiaries of the Cities Service Company.

* * *

Stuart Cooper, vice president of the Philadelphia Suburban Counties Gas & Electric Company, recently merged with the Philadelphia Electric Company, and Fred B. Hofft, vice president of the Pennsylvania Electric Company, (formerly Penn Public Service Corporation), have been elected vice presidents of the United Gas Improvement Company.

* * *

S. H. Atkinson, assistant general manager of the MacClatchie Manufacturing Company, Compton, Calif., is now in the Mid-Continent, visiting the various fields. During his three weeks' trip before returning to the company headquarters, Mr. Atkinson will accompany A. O. Nelson, MacClatchie's Mid-Continent representative, on an investigation of conditions in Oklahoma, Texas and Louisiana.

* * *

William Ford, chairman of the board of the Owens-Illinois Glass Company of Toledo, Ohio, has been made a director of the Bolsa Chica Oil Corporation at Los Angeles, Calif., to fill a vacancy that has existed on the board for some time. He is not a stranger to the petroleum business as he is interested in companies that hold approximately 100,000 acres of natural gas lands in West Virginia.

C. P. Loney, former agent in Owensboro, Ky., for the Standard Oil Company of Kentucky, has moved to New York City.

* * *

R. J. Moore, formerly general manager of the Dayton Pipe Coupling Company, has resigned on account of ill health.

* * *

J. H. McClurkin, veteran oil operator, is drilling his four hundred twenty-sixth well in Kentucky near Lyonia in Hancock County. He has also drilled some 44 wells in Tennessee.

* * *

J. E. Rouse has been appointed general superintendent of the Standard Oil Company of Indiana refining plants, at Casper, Wyo. R. E. Beard will succeed to Mr. Rouse's former position.

* * *

Reese Lemon, general manager and vice president, of the Economy Pump & Tool Company, of Los Angeles, Calif., is stopping in Tulsa a few days and visiting the home folks in Kansas, while making his annual trip through the Mid-Continent oil fields.

* * *

Bert E. Morehart, formerly in charge of the Frick-Reid Supply Company of Cisco, Tex., is now working out of the Fort Worth office. Mr. Morehart first came to Texas in 1919 and was in charge of the company's office at Ranger, moving from there to Cisco, Tex.

* * *

Mr. and Mrs. A. D. Aitken, Jr., have gone to New York from Tampico, Mexico. Mr. Aitken had been employed by the Huasteca Petroleum Company in Tampico and went to New York to take up his duties with the Pan American Petroleum & Transport Company.

* * *

A party of Kansas operators consisting of Ralph Pryor, Fred Jones, Floyd Lockhart and Bill Aniworth, all of Wichita, Kans., has left for the Gulf of Mexico, to enjoy the deep sea fishing. The party has chartered a boat and expects to be gone for the next 10 days.

* * *

Lee M. Koen, vice president of the W-K-M Company, Inc., of Houston, Tex., is in California on an extended business trip. Mr. Koen will visit the California fields and investigate the possibilities for certain pieces of new equipment with which his company is now experimenting.

* * *

L. H. Wentz, chairman of the Highway Commission of Oklahoma, and prominent oil operator, and R. S. Sterling, chairman of the Highway Commission of Texas and prominent as an oil operator, were in attendance at the Texas convention of county commissioners held recently in San Antonio.

* * *

Paul G. Weidner has been appointed general superintendent of the gas department with the title of chief engineer, of the Midwest Refining Company, vice Wallace R. Finney who resigned to accept a position with a subsidiary of the Standard Oil Company of Indiana in eastern territory. Mr. Weidner has been with the Midwest since 1922.

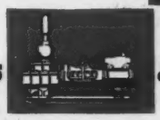
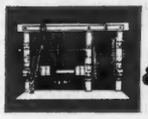
* * *

J. C. Ballagh, secretary of Patterson-Ballagh Corporation, manufacturers of Bettis Protectors, is in the East, his itinerary including New York City where he will confer with his corporation officials and will later attend the American Petroleum Institute Convention in Chicago. Returning to his Los Angeles office he will stop en route in Tulsa, Houston and other points to visit various oil fields. Part of the trip will be made by airplane. Mrs. Ballagh will accompany him.

* * *

The following utility officials are making a tour of West Texas oil fields, after having been entertained at San Angelo by officials of the West Texas Utilities Company: Lord Churston and son, Richard Yarde-Buller, of Insull, Son & Co., of London; A. J. Thomas, vice president of Canadian Utilities; J. C. Kennedy, president of Southwest Utilities Company, and E. B. Neiswanger of the Central Power & Light Company. The West Texas Utilities Company has several hundred miles of high lines in West Texas and with the Pecos Valley Power & Light Company is doing much in the way of electrifying drilling, pumping and other operations in the various oil fields over West Texas, besides supplying the West Texas towns with light and power.

"OILWELL" LEADS THE FIELD IN VENEZUELA

THE Amount of "OILWELL" Equipment used in the oil fields of Venezuela is greater than the combined total of all others. For example... more than 50% of the Boilers are "OILWELL"... more than 60% of the Pumps  are "OILWELL"... more than 50% of the Rotaries are "OILWELL"... more than 50% of the Swivels are "OILWELL"... more than 60% of the Hoists  are "OILWELL"... THIS Leadership is the result of a thorough knowledge of oil field requirements... backed by the facilities to produce equipment that provides greater efficiency under all working conditions. THIS Leadership indicates the confidence oil men have in "OILWELL"

equipment... no matter where they go to develop new fields.

OIL WELL SUPPLY CO.

NEW YORK—LOS ANGELES—PITTSBURGH, U.S.A.—SAN FRANCISCO—TAMPICO—LONDON

WORLD'S OLDEST AND LARGEST MANUFACTURERS OF OIL FIELD EQUIPMENT

Central Ohio Field Continues Active

Thirty-two Completions Reported for Week. Better Results in Indiana Area. Fair Producers in Southwest Illinois

By Whit
Staff Correspondent, Central West Fields

FINDLAY, Ohio, Nov. 25.—Drilling operations remain quite active in all areas of the Central West Field, outside of northwestern Ohio. There may be a few wells drilled in the Tiffin Field of Seneca County and an occasional well in other parts of the large Trenton Rock territory. Central Ohio is the most actively developing area at this time owing to the work being done by the gas companies. Very few counties have not shown some oil and gas in tests made in the past and no doubt the coming year will see those counties more thoroughly tested. Among these are Wyandot, Hardin, Shelby, Mercer, Van Wert, Paulding, Henry, Putnam, Lucas, Ottawa, all within the old Lima Field. Illinois is showing numerous completions, not only in the older fields around Bridgeport, in Lawrence County, but in Crawford County as well, while in the western part of Illinois territory has been leased along the Mississippi River, both north and south of the active field in St. Clair County.

Only one well was reported completed in the old Lima Field of northwestern Ohio, and that was drilled by Frank Willis, on the Frank Feasel farm, NW, Section 2, Hopewell Township, Seneca County. This well topped the Trenton at 1,234 feet and was drilled 298 feet in the Trenton to a total depth of 1,532 feet, but failed to make a producer of either oil or gas. The Feasel farm is known as the old M. Smith farm, on the oil map.

CENTRAL OHIO

Thirty-two completions were reported from the Central Ohio fields, with 7 producers with an initial production of 115 bbls., 8 dry holes and 17 gas wells, while in new work started there were 8 locations made and 34 wells started spudding, a total of 42.

Ashland County reported but one completion, a fairly good gas well by the Kemrow Co., in No. 3 on the Ben Evil farm, Section 29, Orange Township, the gas being found at 2,335-40 feet. Ohio Fuel Gas Co. is drilling No. 1-4929 on the Angeline Darron farm, Section 23, Greene Township. Edmonds and others' are drilling a second test on the George Horn farm, Section 21, Lake Township. In this township, Robinson and others' have a show of gas at 688 to 701 feet, on the Mathias Kopp farm, Section 16, and John Neading and others' have a showing of oil from 614 to 649 on the George Horn farm, Section 21.

In Medina County, Lafayette Township, the Ohio Fuel Gas Co. has a fair gas producer in No. 1-4833 on the Atlas J. House farm, Section 6. Same company has a dry hole in No. 1-4835 on the Levi Derhammers farm, Lot 58, Westfield Township, as the sand was found broken.

In Lorain County, Carlisle Township, the Daugherty Co. found nothing but broken sand in No. 4 on the J. C. Palmer farm, Section 14. Wiser Oil Co. is drilling No. 4 J. C. Palmer farm, same section, and the Ohio Fuel Gas Co. made a location for No. 1-4949 on the J. G. Diedrick, Section 13.

Wayne County

In Wayne County, Congress Township, Barnett and others' second test on the John Keim farm, Section 5, is an average gas producer, while the Ohio Fuel Gas Co. brought in a gas well above the average in No. 1-4845 on the J. H. Wiley farm, Section 12, same township. Harmon & George are drilling on the Lewis Howman Section 32. The Kemrow Co. made a location on the T. E. Balliett farm, Section 1, and the Ohio Fuel Gas Co. is drilling No. 1-4921 on the William C. Martin farm, Section 31. A dry hole was drilled by Faulkner and others' on the Ashley Smyser farm, Section 25, Chester Township, from 620 to 634 feet. Hall and others' are drilling on William Daugherty, Section 36. In Paint Township, the Ohio Fuel Gas Co. is drilling No. 1-4906 on the D. J. L. Miller, Sections 21-22.

In Holmes County, Richland Township, the East Ohio Gas Co. has a 2-bbl. well on the C. S. Brown farm, Section 7, at 3,019-67 feet.

In Knox County a very nice gas well was drilled by the Ohio Fuel Gas Co. in No. 1-3623 on the Justin Durban farm, Section 21, Jefferson Township. Same company drilled a fair gas well on George W. Beckley farm, Section 21, Jackson Township, at 3,103-149 feet. Upham Gas Co.'s test on the James Davis, Section 6, Monroe Township, is an average gasser at 2,462-81 feet. The Pure Oil Co. brought in a dry hole on the Avery Yearhouse farm, Section 11, Union Township, at 2,938-76 feet. Upham Gas Co. is drilling No. 8 Rebecca J. Kunkle, Section 6, Brown Township.

In Coshocton County, Clark Township, the Ohio Oil Co.'s No. 3 on the Frank Mullett farm, produced an initial of 65 bbls. at 3,491-3,537 feet. Bert Uhl is drilling No. 5 Bert Uhl farm, Sections 1, 2 same township. Bell Brothers are putting down a test on the G. F. and W. E. Stockum farm, in Tuscarawas Township.

Summitt County

In Summitt County, Franklin Township, the East Ohio Gas Co. drilled a light gas well on the Jenne. Bolander farm, Section 23, at 4,050-47 feet. F. A. Brendall and others' have a fine gas well in No. 2 on Charles Smith farm, Section 34, same township, at 3,918-40 feet. Stolz Oil and Gas Corp made a location on the F. B. Silk farm, Section 13, same Township. East Ohio Gas Co. is drilling No. 1 Adam Lauby farm, Section 17, Greene Township, same county.

Jackson County

In Jackson County, Washington Township, the Ohio Fuel Gas Co. has a small gas well in No. 7-3567 L. N. P. Poland, Sections 8 and 9, in the Clinton sand from 2,367-76 feet, total depth, 2,381 feet. Same company's No. 1-3579 on the W. L. McGhee, Section 10, Coal Township, is a light gas well in the Clinton, from 2,611-25 feet, total depth, 2,646 feet. Same company is drilling No. 1-3438 Leonard T. Rice farm, Section 23, same township. In Lick Township, the Penn Oil and Gas Co.'s second test on the Samuel Sonne farm, Lot 63, Lick Township, in which the well found the Clinton from 5,538-46 feet, then the Medina at 2,593 feet, total depth, 2,639 feet, and developed into a dry hole. Ohio Fuel Gas Co. made a location for No. 1-4907 on the Peter Radcliff farm, Lot 120, same township.

In Vinton County, the Co-operative Oil Co.'s No. 4 Cameron Clark farm, Section 3, Knox Township, reported good for 10 bbls. initial from 1,119-30 feet.

In Stark County, Lawrence Township, Norwood Johnson made a location on the Peter Kalesar farm, Section 8.

In Guernsey County, the Ohio Fuel Gas Co.'s No. 1-4779 on the Isaac Gramblett, Section 16, Wheeling Township, was dry in the Niagara lime from 3,260 to 3,448 feet. North Salem Oil & Gas Co. is drilling No. 5 C & A. Gray, Section 11, and made a location for No. 7, same farm. Capitol Drilling Co. is drilling on the J. W. McFadden, Sections 1 and 2 same township. J. R. McBurney and others' are drilling No. 2 McBurney farm, Section 9, Adams Township.

In Morgan County, Union Township, Buck Run Oil Co.'s No. 20 J. C. Buckley, Section 2, pumped 5 bbls. in the Cow Run sand from 104 to 125 feet. Same company is drilling No. 21 J. A. & A. Rouanzoin, same section, Cameron and others' drilled a duster in a second test on the C. B. Smith, in Homer Township, in the Berea from 1,261-72 feet, total depth, 1,296 feet.

The Oko Oil and Gas Co., of Lima, Ohio, drilled in No. 32 on Sanford-Watson farm, Lot 10, Section 3, Chatham Township, Medina County, showing for a 3-bbl. pumper. This is shallow territory. Ohio Fuel Gas Co. made a location on the Alpha B. Rogers, Section 19, Harrisville Township, same county.

Crawley and others' drilled in a test on the A. W. Wigton, Section 3, Clay Township, Muskingum County, reported good for about 200 bbls. initial. Several other wells are under way in this township.

INDIANA

The Indiana fields continue to be more active than during the early part of the season and better results are being obtained in the finding of both oil and gas. Drilling operations are well scattered over the State. Word comes from the extreme southern part of the State, that a good showing has been found in north of Troy, Perry County, near where the Packard Oil Co. has done some successful work. What the well is good for will not be known until put on the pump. The test was drilled by Daugherty and Heck. When the drill penetrated the pay sand only two feet, the hole filled up with 200 feet of fluid in 20 minutes and in 4 hours the 858 feet of hole stood half full of fluid. There being no tankage to take care of the oil the well was capped. This well is about 25 miles northeast of Owensboro, Ky., and attracted considerable attention among the large number of operators that make Owensboro their headquarters. It may mean the opening of a new producing area.

Word comes from western Indiana of the finding of oil in a wildcat drilled by the Mich-Ohio Oil Co., on the H. W. Bledso 240 acres, the 160 acres in the NE and the N half SE, Section 6, Salem Township, Pulaski County, about 1½ miles northwest of Francisville. The oil was found according to advice from George C. Christman, head of the company, in the base of the Niagara lime at a depth of 642 feet. The well has not yet been given a test, but the company will put in four strings of tools and drill 10 more tests. This well is not far from the old shallow pool of 30 years ago.

Gibson County

In Gibson County, Barton Township, the United Oil Corp. got a dry hole in the northwest corner of the Eliza M. Harper, Section 8, at 1,408 feet. In Columbia Township, the Shell Petroleum Corp., brought in a second well, 220 feet from the north line and 650 from the east line of the George Allen farm, NE, Section 22, that is reported with a volume of 9,000,000 feet, at from 1,434-41 feet. No. 3 same farm, is drilling. The Indiana Oil & Gas Corp. drilled a dry hole near the southeast corner of the Wesley Ice farm, in M D-128, of Washington Township, same county, at 1,506 feet. This is the largest gas well found for some years in southwestern Indiana. Same company is starting a test on the Perry Colvin, Section 6, same township.

Pike County comes to the front with some nice oil producers, the best of which is the F. B. Hillis, trustee, No. 2 well, 600 feet from the north line and 200 from the west line of the W. H. Lindy farm, SW, Section 31, Clay Township, with an initial of 75 bbls. from 1,311-23 feet. Illpava Oil Co.'s No. 1 Bessie Miller farm, Section 31, same township, is reported good for 25 bbls., and William Bell and others' test on the Berkley-Hill farm, same section, produced 35 bbls, from 1,296 to 1,313 feet. Ohio Oil Co. abandoned Nos. 3 and 5 on the M. F. Snyder farm, Section 2, Madison Township, same county.

Reicher and others' test in the northwest corner of the National City Bank farm, SE, Section 16, Veale Township, Daviess County, came in a duster at 1,150 feet. Ross and others' are drilling on the Percy Ross farm, Section 32, same township, and near Sandy Hook.

George W. Buff and others' second test, 50 feet from the north line and 900 feet from the west line of the George W. Buff farm, SE, Section 4, Gill Township, Sullivan County, was dry at 851 feet, and the Dome Oil Co.'s No. 1 Morris Unger farm, Section 26, same township, was dry at 1,750 feet.

Knightstown Natural Gas Co., drilled in two gas wells near Knightstown, in Henry County.

ILLINOIS

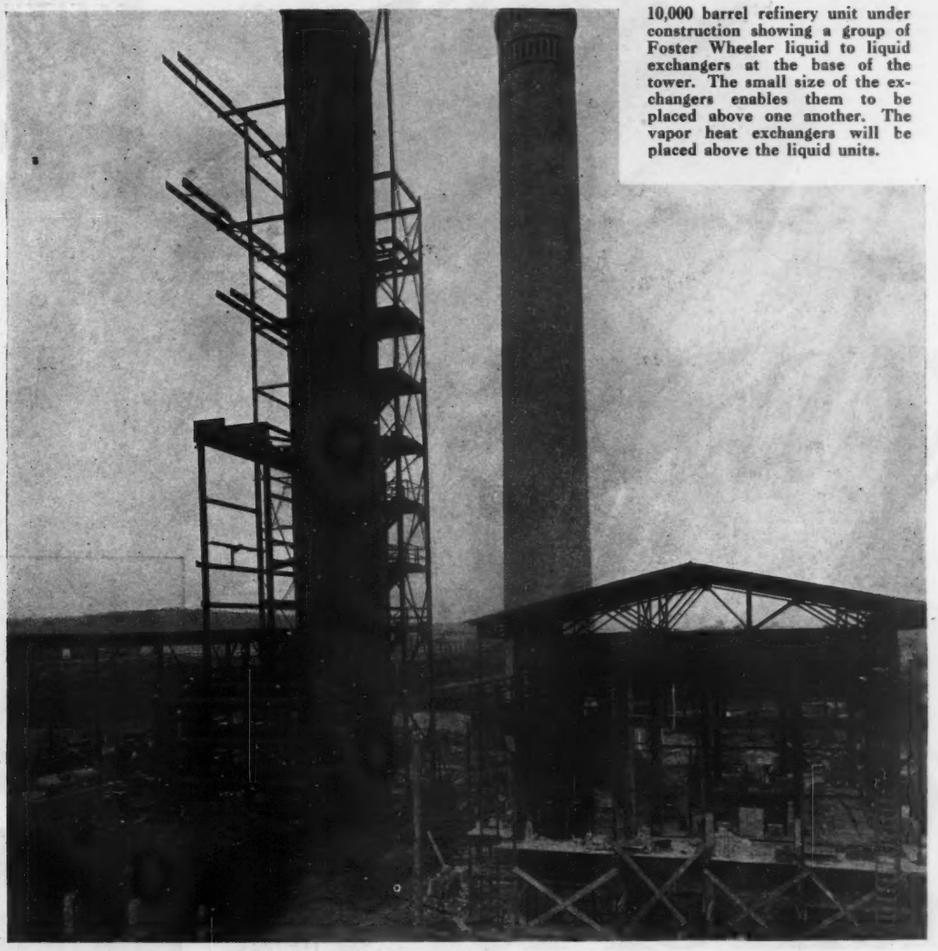
Some very nice producers are still being found in the Dupo Field, in Sugar Loaf Township, St. Clair County, in the Trenton Rock formation south of East St. Louis. In the Dupo Field, the Ohio Oil Co.'s No. 20 on the Matilda Dyroff, NE; Section 28, Sugar Loaf Township, produced an initial of 125 bbls. from 458 to 511 feet, and the same company's No. 4 on the Hall-Weihl, same section, produced an initial of 150 bbls. from 453 to 500 feet. Lon Sanders and others' No. 2 Pauline Eckert, SW, Section 34, produced an initial of 150 bbls. from 453 to 750 feet. Ohio Oil Co.'s No. 3 Phillip Frye, NE Section 33, pumped 25 bbls. from 644 to 732 feet. C. C. Bundy, trustee, drilled in a 17-bbl. pumper in No. 1 on the Odd Fellows lot, SE Section 31, in Dupo village. Duncan Brothers hit a dry spot on the William Eckerts, NW, Section 2, same township, from 811 to 872 feet.

A dry hole was drilled by the C. M. Root Oil Co. 600 feet from the south line and 300 from the east line of the R. T. McAdams farm, SE, Section 21, East Fork Township, Clinton County, from 1,428-54 feet.

In the Allendale Field, Wabash Township, Wabash County, Joe S. Young Jr. and others' No. 9 in the southeast corner of the Collison Hrs., farm, NW, Section 13, was dry at 1,526 feet.

In Lawrence County, Dennison Township, the Associated Producers Co.'s 21 well, 1,900 feet from the south line and 900 feet from the west line of the J. F. Snyder farm, NE, Section 25, produced 2 bbls. from the McCloskey sand at 1,800 feet. In Petty Township, the Ohio Oil Co.'s No. 16 near the northeast corner of the Clint Thorn farm, in the SW, Section 12, was drilled to a total depth of 1,672 feet, but was plugged back to the Kirkwood sand at 1,406 feet, where it was given a 100-quart shot, and produced an initial of 13 bbls. Craig & Lowrie abandoned their old No. 1 on the Amos Goff farm, Section 25.

The Ohio Oil Co. drilled a dry hole in No. 11 well near the northwest corner of the M. E. Thomas farm, NE SW, Section 34, Martin Township, Crawford County.



10,000 barrel refinery unit under construction showing a group of Foster Wheeler liquid to liquid exchangers at the base of the tower. The small size of the exchangers enables them to be placed above one another. The vapor heat exchangers will be placed above the liquid units.

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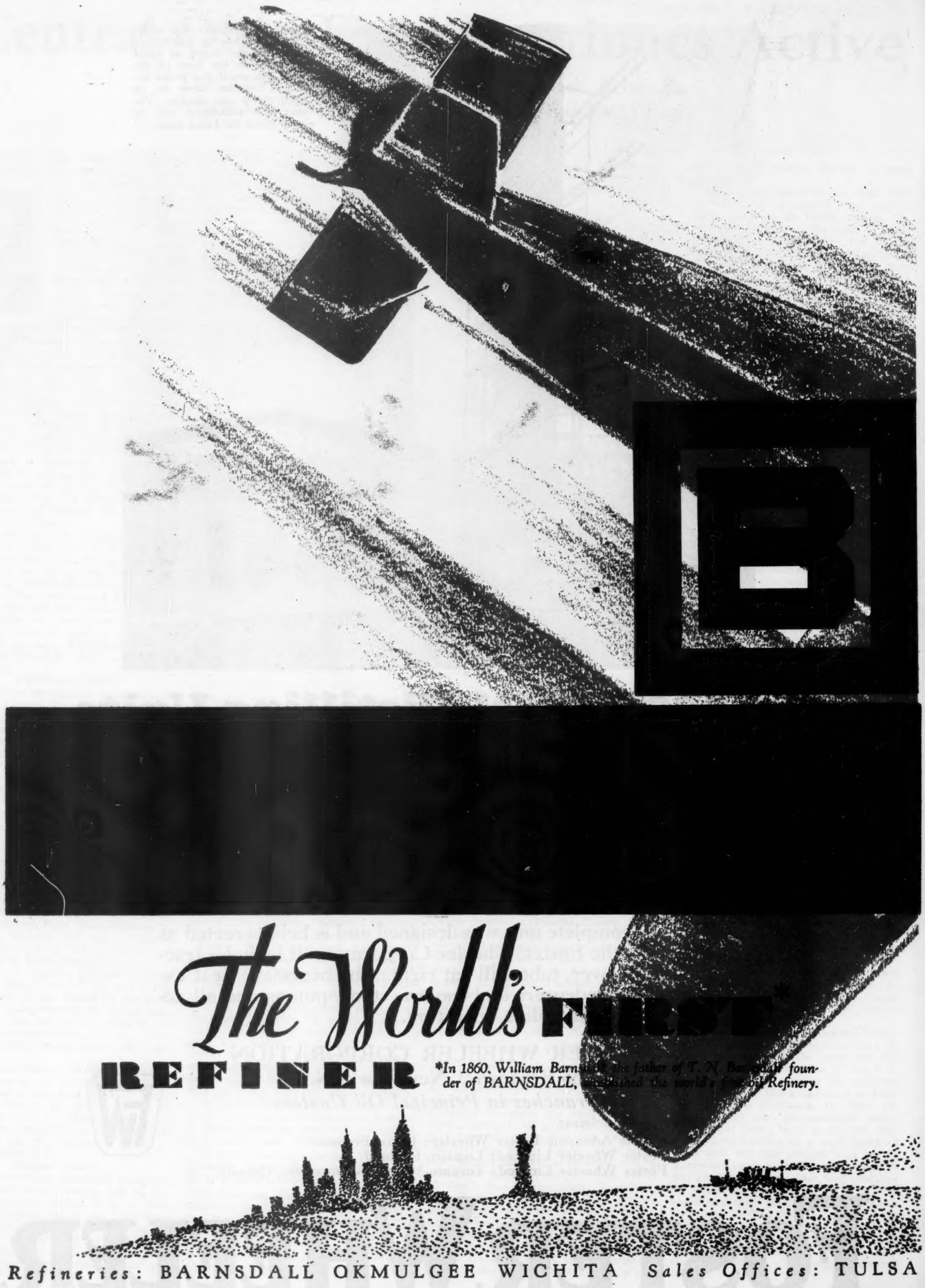
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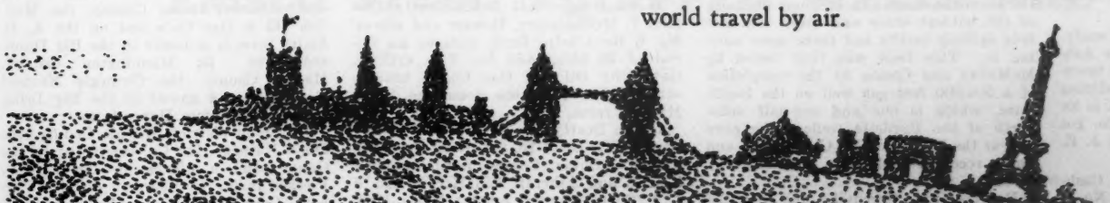

CHICAGO NEW YORK ST. LOUIS KANSAS CITY ST. PAUL LOS ANGELES

Get Fair Wells in Perry and Muskingum

Considerable New Work Starting in Guernsey County, Ohio. West Virginia Has One Well Better Than Average

By D. S. Wakenight
Staff Correspondent, Eastern Fields

PITTSBURGH, Pa., Nov. 25.—In the SW of Section 5, Hopewell Township, Muskingum County, the Preston Oil Co. completed and shot in the Clinton sand a second test on the J. W. Varner farm. It produced 110 bbls. the first 24 hours. In Pike Township, Coshocton County, Spindler, Donnan & Co. completed in the same formation No. 5 on the Wolford farm. It is good for 70 bbls. a day.

In the NE of Section 4, Harrison Township, Perry County, the Wehrle Co. completed and shot in the Clinton sand a test on the Longstreth lots. It produced 182 bbls. the first 24 hours. In the same locality the Rosa Oil Co. got a 60-bbl. producer at a second test on the C. H. Ryland farm. In the NE of Section 4, Harrison Township, Perry County, the Wehrle Co. completed and shot in the Clinton sand a test on the Sagle, Mauck & Porter lots. It produced 110 bbls. the first 24 hours. In the NE of Section 1, Center Township, Monroe County, I. J. Denbow completed in the Cow Run sand a light pumper on the M. Wahl farm.

In Section 25, Wayne Township, the Brister Oil & Gas Co. and others completed No. 3 on the Maywood Christy farm. It is a 4-bbl. pumper in the Big Injun sand. At Germantown, Section 17, Liberty Township, Washington County, Harold Burton & Co. completed in the Big Injun sand a test on the Parrens Brown farm. It is dry and abandoned.

In the NE of Section 18, Harrison Township, Perry County, the Ohio Fuel Gas Co. completed a gasser good for 500,000 feet in the Clinton sand on the Goff-Delong farm. At Bollin Mills, Section 4, Knox Township, Vinton County, H. C. Farmer has a 5-bbl. pumper in the Berea grit on the John W. Stanley farm.

Meigs County

In the NE of Lot No. 1,217, Sutton Township, Meiggs County, the Pure Oil Co. completed in the Berea grit No. 6 on the Krider heirs' farm. It is a 4-bbl. pumper. In the SW of Section 12, same township, the Twenty-Five Association, Inc., completed in the Cow Run sand No. 3 on the J. E. Stobart farm. It is a duster.

In Lot 2, Chatham Township, Medina County, the East Ohio Producing & Refining Co. completed No. 10 on the Steven and Anna Jelencsics farm. It is a duster.

In Section 7, Richland Township, Holmes County, the East Ohio Gas Co. completed in the Clinton sand a test on the C. S. Brown farm. They swabbed 48 bbls. the first 72 hours after shot. The oil right on this lease is held by the Pure Oil Co. The well will be turned over to and operated by the Pure Oil Co.

In the SW of Section 2, Eaton Township, Lorain County, the Preston Oil Co. completed in the Berea grit a test on the W. M. Herriush farm. It produced 20 bbls. the first 24 hours.

In Perry Township, Licking County, M. F. Whitehill's test on the Alice Ashcraft farm is a gasser. In the same township the Hope Construction & Refining Co.'s No. 3 on the M. Rector farm is an 8-bbl. pumper. The Preston Oil Co. got the same kind of a pumper on the J. E. Scanlon farm.

In Section 12, Pike Township, Coshocton County, the Pure Oil Co.'s No. 5 on the William L. Norris farm is a 5-bbl. pumper in the Clinton sand. In the same township, same company is due in the sand on the G. W. Crawford farm.

Muskingum and Athens Counties

In the SW of Section 5, Hopewell Township, Muskingum County, the Preston Oil Co. has completed and shot in the Clinton sand a second test on the J. W. Varner farm. It produced 110 bbls. the first 24 hours. In Section 9, Lee Township, Athens County, Townsend and others completed in the Berea grit a second test on the Emma Marcu estate. It is a duster. At Athens, Lot 58, Athens Township, the Athens State Oil & Gas Co. completed in the same formation No. 16 on the Ohio state lands. It is a very light pumper.

In Section 18, Sutton Township, Meigs County, the Preston Oil Co. completed a second test on the Mary Davis farm. It is a 5-bbl. pumper in the Berea grit. In the southern end of Lot 292, Sutton Township, the Southern Ohio Gas Co. completed in the same formation No. 4 on the Brosalea Chemical Co.'s property. It is a 2-bbl. pumper.

In Center district, Monroe County, Abram Goldstein completed a light pumper on the John Burkhart farm. In Section 8, Franklin Township, Shay & Co. completed a second test on the C. H. Hiner farm. It is a 2-bbl. pumper. In Section 5, Harrison Township, Perry County, the Ohio Fuel Gas Co. has a gasser good for 1,500,000 feet at a second test on the Layzelere farm. In the same township the same company is drilling tests on the C. Wilson, Goff-Delong and J. W. Wilson farms.

In Falls Gore Township, Hocking County, the Griffith Producing Co. has a 6-bbl. pumper at No. 7 on the Dora Thompson farm. In Section 24, Perry Sturm and others have a 3-bbl. pumper at No. 6 on the Woodruff heirs' farm. In Section 2, Washington Township, the Preston Oil Co.'s No. 5 on the George Miller farm is a 7-bbl. pumper. In Laurel Township William Spangler is drilling on the J. W. Hauser farm.

Guernsey County Tests

Guernsey County has considerable new work under way and starting. In Wheeling Township the Ohio Fuel Gas Co. has rigs up on the A. E. Robins and J. U. Alloway farm and drilling on the C. C. Wilson farm. The East Ohio Producing & Refining Co. has a rig up on the E. C. Quinlin farm. In Section 20 William Lauck and others have a rig up on the C. C. Virtue farm.

Washington County

On Archer Fork, Section 33, Independence Township, Washington County, Harlan Schramm & Co. completed in the Mitchell sand No. 13 on the J. H. Ward farm. It is a natural producer good for 25 bbls. a day. In Section 34, same township, Thomas H. Cisler's No. 6 on the Jane M. Decker farm is a very light pumper in the Salt sand.

WEST VIRGINIA

The West Virginia fields completed but one well better than the average, the Hope Construction & Refining Co.'s No. 1,125 on the Bertha M. Dixon farm, Gilmer County. It is estimated good for 80 bbls. a day in the Berea grit.

In Center district, Gilmer County, McCall & Co. completed in the Maxon sand a gasser on the Homer S. Westfall farm. In DeKalb district C. B. Lewis & Co. have a 4-bbl. pumper in the Keener sand on Clyde Amos farm. In the same district the Star Oil & Gas Co.'s test on the Spencer Collins farm is a gasser in the Big Injun sand.

Robert Elder & Co. have completed their test on the Charles Iams farm. It is dry and abandoned. In Grant district the Hope Natural Gas Co. has a gasser in the Big Injun sand on the W. J. Shields farm. In Grant district J. H. Wagner has a very light pumper on the F. P. Weekly farm. In Troy district, Gilmer County, C. M. Bennett & Co. have a gasser in the Big Injun sand on the H. S. Lamb farm.

On Rush Run, Smithfield district, Roane County, the Ohio Valley Gas Corp. completed a gasser good for 500,000 feet in the Big Injun on the S. S. Harless farm. Located one-half mile below Elk station, Sardis district, Harrison County, Henthorne & Lancaster have shot in the Big Dunkard sand their test on the Ellis Marsh farm. It is a 2-bbl. pumper.

Mingo County

On Bear branch of Breeden Creek, Harvey district, Mingo County, the Red Jacket Oil & Gas Co. has drilled into the Maxon sand No. 8 on the Red Jacket Coal & Coke Co.'s tract and it is a fair gasser.

On Big Root Creek, Center district, Calhoun County, W. H. Bickel completed a gasser good for 1,000,000 feet a day in the Maxon sand on the A. E. Kenney farm. The location is 2,000 feet west of his test on the James Shanks farm. In the same district Rothwell & Co. have a gasser on the Bruce Ferrell farm.

On Sycamore Creek, Sherman district, Calhoun County, the Virginian Gasoline & Oil Co. has completed in the Big Injun sand a second test on the Arminda Elliott farm. It is a 5-bbl. pumper. In Lee district, same county, the South Penn Oil Co. has a 5-bbl. pumper in the same formation on the L. G. Garrett farm.

In Cass Township, Monongalia County, the Carnegie Natural Gas Co. completed a gasser in the 50-foot sand on the T. A. Lazzell farm. In Clay district, same County, the Hope Natural Gas Corp.'s No. 686 on the Ruth E. Stevens farm, an old well drilled down, is a gasser in the Fifth sand.

In Smithfield district, Roane County, the Ohio Valley Gas Corp. has completed a gasser in the Big Injun sand on the D. H. Harless farm. In Walton district the United Fuel Gas Co. is testing for oil at No. 3,953 on the B. K. Littlepage farm.

Calhoun County

In Sherman district, Calhoun County, W. H. Bickel's second test on the A. Shock farm is a gasser in the Big Injun sand. In Center district L. P. Bickel has a gasser in the same formation on the Martha Stump farm.

On Dry Ridge, Grant district, Ritchie County, the Astron Oil Co. completed in the Big Injun sand No. 13 on the Herman Stursberg Realty Co.'s tract a gasser good for 200,000 feet. In Collins Settlement district, Lewis County, the Mudlick Oil & Gas Co.'s test on the A. B. Smith farm is a duster in the Big Dunkard sand. In Mannington district, Marion County, the Carnegie Natural Gas Co. has a gasser in the Big Injun sand on the James Hayes farm.

In Union district, Ritchie County, the Hope Natural Gas Co. completed in the Gantz sand a duster on the Lee F. Flesher farm. In Sherman district, Calhoun County, the Hope Construction & Refining Co. has a gasser in the Big In-

(Continued on Page 109)

NIAGARA FIELD, WESTERN KENTUCKY, HAS COMPLETION ABOVE AVERAGE

By Whit
Staff Correspondent, Kentucky-Tennessee

OWENSBORO, Ky. Nov. 25.—The outstanding feature of the week was the bringing in of a well above the average, for its location, which is in the Niagara Field, in Henderson County, in western Kentucky. This well was drilled on the Niagara High School lot, owned by the county board of education, and in a 13 hour test is reported to have put 175 bbls. in tankage, making it the largest well yet reported from the rapidly growing Niagara Pool. Its production is about the same as that of the well recently completed by H. Z. Clark and the Wittmer Oil and Gas Co., in the same pool.

Another area attracting widespread attention is north of the Haynesville Field, in northern Ohio County, where James C. Ellis and others recently bought in a fair oil producer on the Geo. Burdette 63 acres, the oil being found in the Jett sand around 300 feet. The territory to the east of Haynesville is also being closely watched. John H. McClurkin and D. T. Bolling are starting a test on the Dan Burt farm, in the vicinity of Haynesville about a mile northeast of the wells on the Burdette farm. This is new territory of the wildcat order and there are now four drilling outfits and three more moving in. This field was first tested by McMahan and Combs by the completion of a 500,000 foot gas well on the Smith farm, which is one and one-half miles north of the Burdette wells. The area is near the Hancock-Ohio County line and until recently had been neglected by oil men.

Reports from Greenville are that the second well of the Missouri-Kansas Pipe Line Co. on the John Corley, in Muhlenberg County, was making a nice oil showing, with prospects of it being among the good wells of that field.

Eastern Kentucky Wells

A few scattered completions were made in the eastern portion of the State. Wayne County is showing a slight revival in new work, there being several strings of tools running. In District 3 of Wayne County, the Pigeon Rock Oil Co.'s No. 12 on the Stearns Coal and Lumber tract, pumped 5 bbls. Smith-Cameron Co.'s No. 2 Clint Bell, same district, is due for completion as is Bain & Hogue's No. 3 on the Silas J. Burnett farm. J. C. Blair and others are also nearing completion on the J. F. Gregory farm, District 5. In District 13, same county, John Toller's test on the T. M. Taylor, was dry, and he is drilling on the Lou Dishnear farm. M. D. Shearer is drilling near sand on No. 7 Coyle heirs, as are Vogle & Work on the Hicks heirs farm. Herman & Frank are due to hit pay sand soon on the A. D. Catron, as is William O. Southern Jr., No. 11 on the Nancy Jones and others' farm.

In the Irvine Field, Estill County, District 7, McEldowney, Bowser and others' No. 6 Reed heirs farm, pumped an initial of 20 bbls., and No. 7 is drilling. Gate City Oil and Gas Co. is nearing sand in No. 9 on the John and Patsy Marcum farm.

In the Beattyville Field of Lee-Owsley Counties, District 16, the Swiss Oil Corp. No. 2 Armina Combs farm, pumped 5 bbls., and Ashcraft and Barnes' No. 4 J. A. Curry, pumped 2 bbls. Cribbs, Hedrick and others are nearing sand in No.

(Continued on Page 130)

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[Patented 1,462,746, July 24, 1923; 1,525,214, Feb. 3, 1925; 1,599,692, Sept. 14, 1926; 1,605,873, Nov. 2, 1926; 1,610,589, Dec. 14, 1926; 1,644,499, Oct. 4, 1927; 1,690,955, Nov. 6, 1928, and numerous other Patents Pending.]

EMSCO STEEL EQUIPPED WELLS ARE SAFE

Field Problems and Their Solution

EDITED BY THOMAS F. SMILEY

In order that men connected with the drilling, producing and transporting branches of the petroleum industry may procure quickly a solution of many problems confronting them from time to time in their work, The Oil and Gas Journal has arranged with leading engineers and other recognized authorities to answer questions submitted by readers of this publication pertaining to the work of drilling and producing crude oil and transporting this product.

Everyone is invited to submit questions freely. These questions will be submitted to proper authorities by Mr. Smiley, who edits the page, and answers, based on the best available information, will be published. Each question should give as much detail as possible, especially where it relates to matters where depths of sands, types of sands and operations on adjoining properties would have a bearing on the problem involved. The source of all questions will be considered as confidential and only initials will be published in connection with the question.

In this connection, The Oil and Gas Journal will be glad to publish articles from field men who have devised new methods or practices which are improvements.

In case an immediate answer is important, one will be given by mail if the writer requests it.

MUCH OIL UNRECOVERED

Is there any way of telling how much oil has been taken from the ground in this country since the oil business got under way after the drilling of the Drake well, that is has any reliable record been kept? How much of the total world production does the United States produce? Have scientists made any kind of reliable estimate of how much oil there still remains in the ground?—G. E. S.

Available records show that more than 11,728,000,000 bbls. of oil have been taken from the ground in this country since 1859, when Colonel Drake brought in the first commercial well. The United States produces about 70 per cent of the world's petroleum.

Scientists have not attempted to estimate the amount of oil that still remains underground. It would be hopeless to do so, for the reasons that nobody knows how many oil pools there are waiting to be discovered and nobody knows just what portion of the oil in the known pools is recoverable by the methods thus far in use. Evidence presented to the Federal Oil Conservation Board shows the prevailing belief that not more than 25 per cent of the oil found can be brought to the surface by ordinary methods. Some authorities express the belief that not more than one-sixth of the oil is recovered.

Using these divergent views and the amount of oil already recovered as the basis for an extremely rough approximation of the oil unrecovered in known pools only, it might be said that something like 90,000,000,000 bbls. will remain in these known pools after the present methods of recovery have done their best.

It is the expressed belief of some authorities that a second crop of petroleum from known sands in proved areas as great as that already recovered and available can be obtained by methods which are to be developed.

USING DYES AS DETECTORS

Dyes sometimes are used, I understand, in finding out where underground waters are. Will you tell me please how dyes are employed in this way? What kind of dyes are used in this way and just how are they used for this purpose?—E. S. S.

Considerable work has been done by the engineers for the U. S. Bureau of Mines and by others in trying to find some dyes or indicators that can be used in dectecting the movement of underground waters, but while they have been successful in certain cases in determing the direction and rate of travel of water, their application to oil wells is still limited.

Where wells are close together some success has been attained by the use of such dyes as fluorescein, eosine, methylene blue, Venetian red and acid orange because small quantities of these dyes have been readily detected.

Where two or more wells are within 300 to 500 feet of one another, indicators can be used successfully, but it is by no means easy to test wells several hundred yards apart by this method. The rate of travel of indicators is slow and the area over which the dyes will spread is large, the result being that the final quantity of indicator received at the well is so small that it is out of the question to use indicators successfully unless a well-defined channel exists between two wells.

A great deal of work has been done in the Bradford Field of Pennsylvania with dyes and indicators and the general results are much as described here. It is stated that certain reports made of successful tests having been made in wells in the Teapot Dome Field and Salt Creek area in Wyoming were in error, as it was found that the same bailer had been used to dump the indicators into the wells on the Teapot Dome side of the line as was used later to remove the samples on the Salt Creek lease side, and this bailer had not been properly cleaned between the tests.

Water analysis has been so perfected that it is now possible to correlate waters from various wells in a satisfactory manner and this method is relied upon more than the use of dyes.

LOT OF THINGS IN THIS WELL

I have a gas well that is about 40 years old and have to get it bailed out about once a year. The man that bailed lost his bailer and about 300 feet of one-quarter-inch cable. He tried to fish these out with oil sucker rods and he tore them off, leaving about 250 feet in the well. There is a 2-inch tube in the well, which is cemented with concrete between the casing and the tube. Is there any way to put acid in to eat that stuff out? How much would it take and how long a time? What is the best way to put it in? The tubing can't be pulled out on account of the concrete. The well is about 1,200 feet deep.—J. H.

There is an acid preparation designed for such cases as you seem to have. This acid is used to eat away part of the metal that is frozen in the hole thus freeing it and permitting it to be pulled. It will attack any form of iron or steel and has no selective action. Therefore if you have tubing and casing in this hole as well as the rods, bailer and wire line, the acid would work on all of this metal.

To stop the action of the acid when the rods are freed it is recommended that a mixture of soda be poured into the hole which then should be flushed with water. The quantity of acid required for your job is hard to determine from the information you give. If the well has gas at any considerable pressure and volume the acid would be blown back up the hole and it is not probable that it would be very effective.

Your letter is not clear on several points. It is hard to understand how you could run and cement 2-inch tubing inside this casing if you had 250 feet of sucker rods already in the hole, as well as a bailer and 300 feet of one-quarter-inch line. If all this is below the bottom of the tubing it is not likely that it would have any effect on the volume of gas that will leave the sand and it is recommended that you let the well alone and if the gas volume has fallen off since cleaning atribute it to normal decline rather than because of junk in the well.

If the rods are sticking up in the tubing you can run a sucker rod spear or a combination tubing and sucker rod socket or a slip socket and catch the top of the rods and pull them out.

If the rods are frozen or rusted to the tubing some of the fishing acid could be poured into the tubing, and flushed down with a little water to remove it from the upper part of the tubing, and as soon as the acid has dissolved this rust and the rods are free you could then run in with any one of the fishing tools mentioned and pull the rods out.

If the rods were standing up against the walls of the casing when you ran the tubing and the cement is in the form of a bottom hole plug it would seem that the rods are between the tubing and the casing and in the cement, and they could not possibly do any harm there.

You do not tell the size of the casing, length of the string, length of the tubing string and how you got the cement plug into the space between the tubing and casing. Nor do you tell the volume of gas the well is making, pressure, or thickness of the gas sand. Is there any water in this well?

If you could provide the foregoing additional information as well as a sketch of the conditions as you know them this department would be glad to give you further information.

WHY WAS IT CALLED THAT?

DOG LEGS

One more instance in which Prince has helped out in the terminology of mechanics. Short bends or kinks sometimes appear in the wire cable, and some driller, seeing in them a resemblance to the hind legs of a dog, applied the term dog legs, and it stuck.

DEEP TEMPERATURE READINGS

Do you know where I could obtain the temperature readings for the deep wells named in the enclosed advertisement clipped from The Oil and Gas Journal, if such a thing is available anywhere?—W. L. W.

The wells named in the clipping are in Texas, Oklahoma, Louisiana, Kansas, Wyoming, New Mexico, India and Borneo. It is probable that such information as is available you can obtain from Dr. Charles N. Gould, director of the Oklahoma Geological Survey, Norman, Okla. Doctor Gould also is conducting a series of field tests for the Government to determine the geophysical gradients of wells, and in this connection probably will have trustworthy information concerning well temperatures.

CORRECTING FOR VOLUME

Please illustrate with an example how the Humble Pipe Line Co. will arrive at correction for volume on oil run for the Humble Oil and Refining Co., as referred to in the article by Neil Williams in The Oil and Gas Journal of November 14.—W. E. G.

Tables have been prepared which make it a relatively simple matter to perform corrections of any given volume of oil to 60° F. These tables, worked out mathematically, give a factor which, multiplied by the volume of oil at its observed temperature, supply the correction to 60°.

To use an example, let us suppose we have 1,000 bbls. of oil in a tank. The gravity of this oil is 40° A.P.I. and its temperature is 50° F. By reference to the tables mentioned as they appear in the "Handbook of Petroleum, Asphalt and Natural Gas," published by the Kansas City Testing Laboratory, we find that the factor for oil of this temperature and gravity is 1.0049. So we multiply this by 1,000, the number of barrels of oil in the tank, and get 1,004.9, which is the number of barrels of oil we would have in the tank as the result of expansion, if the temperature of our 1,000 bbls. were raised from 50° to 60° F.

The operation is similar if the temperature of the oil is higher than 60. Let us suppose we have 1,000 bbls. of 32-gravity oil which shows a temperature of 70° F. By referring to the tables we find that the factor in this case is .9960. We multiply this factor by 1,000 and get 996, which is 1,000 bbls. of oil of the gravity named, corrected from 70° to 60° F.

LOOKING FOR AN OIL BOOM

Could you tell me where there is oil tank work going on, if any, and who is doing the work? If there is no tank work, could you tell me where there is an oil boom?—W. J. H.

This department is not aware of any oil boom on at this time, although good oil field workers are always in demand in any active field. The Bradford, Pa., Field is active at this time and is said to be using more men than it has in many years previously.

Tank work is not as active as in times past because of the tendency to conserve gas and oil. The decline in production will indicate to you that more storage is not needed just now. On the other hand, regular work is going forward much as usual and good men are always in demand. You might go through the files of The Oil and Gas Journal for the names of the oil companies engaged in work in the more active fields and write them direct.

LITERATURE ON WIRE LINES

Would you kindly give me the names of books dealing with wire lines? Would also like to obtain literature on this subject from the Bureau of Mines and the American Petroleum Institute or any other source.—W. P. H.

Write to the American Petroleum Institute, 250 Park Avenue, New York, for Standardization Bulletin No. 103, which covers the subject of wire lines extensively. There probably will be a small charge for this bulletin if the applicant is not a member of the institute. An inquiry addressed to the Superintendent of Documents, Washington, D. C., will bring you a list of publications on wire lines by the Bureau of Mines. You will do well to obtain literature from the manufacturers of wire lines, whose names you will find in the advertising pages of The Oil and Gas Journal.

Instead of being "Stuck-on" BLACKOR becomes a part of the tool

Blackor differs from every other known material. It bonds right into the steel and intimately interlaces. This view shows structure of Blackor magnified 700 times and reveals the perfect bond with the steel. Note the hair-like lines of Blackor penetrating the steel and the fingers of steel running into the Blackor facing.

INTIMATE interlacing of Blackor and the steel of the tool eliminates chipping or breaking off and prolongs the life of the cutting edge. Blackor actually becomes a part of the tool and can even be bent with the tool--so perfect is its bond. When applied, it covers the entire surface subject to abrasive wear. The solid Blackor surface is more abrasion-resistant than if the entire surface were packed solid with inserts.

Patent No. 1,613,942
Patent No. 1,424,536
Patent Reissue No. 17,323
Other Patents Pending

BLACKOR COMPANY

Head Office: 215 West 7th St., Los Angeles, Calif.

New York Export Office: 39 Cortlandt Street

Tulsa, Oklahoma Office: 410 Thompson Bldg.

Houston, Texas, Office: 616 Public National Bank Bldg.

BLACKOR

The Super Abrasion-Resistant Facing

DEAL

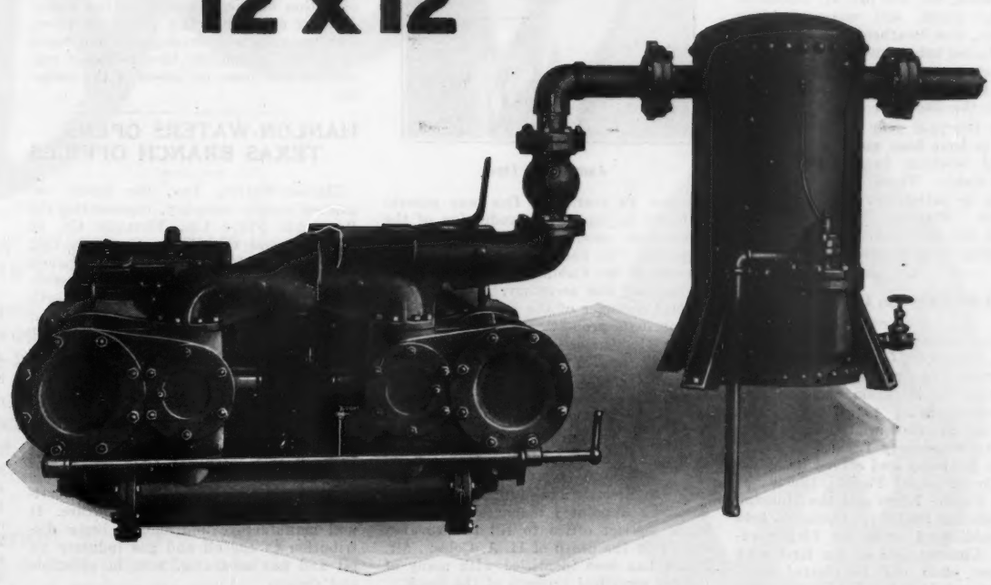
ROLLER BEARING T

TH
NATIONA
COMPA

AJAX

TWIN ENGINE

PISTON VALVE TYPE
12 X 12



THE NEW LARGE CAPACITY STEAM SEPARATOR DESIGNED FOR INSTALLATIONS WHERE LARGE QUANTITIES OF WATER MUST BE HANDLED, DUE TO CONDENSATION IN LONG STEAM LINES, UNDERSIZE BOILERS AND OTHER CAUSES.

THE
AL SUPPLY
MPANIES

EQUIPMENT AND SUPPLIES

WORKING BARREL TUBES NOW CHROMIUM PLATED

A method of chromium plating the interior of tubes, perfected by the Willard Scott Plating Works, Philadelphia, Pa., is a result of long search for means of improving the ordinary seamless working barrel. The results desired were a harder surface without sacrificing the smooth finish, and some method of protecting this surface from corrosion.

Chromium that almost has the hardness of a diamond can now be coated on the inside of working barrel tubing. It is uniform in thickness, with positive adherence. After chromium is applied, the finish is the same as the finish of the metal on which it is plated, retaining the smoothness and even bright finishes.

The thickness of chromium applied to working barrel tubing is usually one-thousandth of an inch. In the chromium plating industry this is considered a thick deposit. It is said that this coating will not only protect the steel working barrel from abrasion, but will prevent corrosion, caused by water, salt water, sulphur crudes, etc., and lengthens the life of the working barrel tube, thus reducing pumping cost. Recent tests in Oklahoma fields are said to indicate that chromium will quadruple the life of a pumping barrel.

During the past year secret tests are reported to have been made with chromium-plated working barrels in various Texas oil fields. These tests are said to have been so satisfactory that the Willard Scott Plating Works installed equipment for chromium plating working barrel tubing in large quantities.

IDECO BUYS SITE IN HOUSTON

The International Derrick & Equipment Co., Columbus, Ohio, has announced the purchase of acreage in Houston, Texas, with the intention of building a large manufacturing plant there. The company has acquired a site of five acres fronting approximately 1,000 feet on the Beaumont Highway and served by trackage of the Missouri Pacific Lines, the Southern Pacific Lines and the Houston Belt & Termnal Railway. Option is held on five additional acres for future expansion. Construction of the first unit of the new plant will be started soon. Ideco's present Houston holdings consist of an office building, a warehouse and a galvanizing plant. The galvanizing plant will be moved to form one of the units of the new plant. The Houston plant will manufacture oil derricks and other oil well equipment, standard steel buildings, airplane hangars, airport buildings and towers, flood lights, etc. The company recently purchased the Boykin Machinery & Supply Co. of Beaumont. This firm has been reorganized as the International Derrick & Equipment Co. of Texas, under which will come the management of both the Beaumont and the new Houston plants. Officers of the subsidiary Ideco company are Harry M. Runkle, Columbus, Ohio, president; B. Boykin, Jr., Beaumont, vice president and general manager, and Lucien L. Powell of Houston, secretary and treasurer.

LUCEY "SOTCO" DISTRIBUTOR

The Lucey Products Corp. is now distributor in the Mid-Continent area for the rotar fishing tools made by the Specialty Oil Tools Co., of Los Angeles, Calif. These tools include the "Sotco" line of hydraulic knuckles (dog-legs), adjustable grabs, spiral fishing guides, combination trip packoff overshots (socket) and plain wall hooks.

JAMES H. DYE IS MADE IDECO VICE PRESIDENT

J. H. (Jimmy) Dye has been made resident vice president of the Oklahoma-Kansas division of the International Derrick & Equipment Co. of Oklahoma. For

James H. Dye

the last 10 years Mr. Dye was general manager in charge of production of the Charleston producing division of the Pure Oil Co. and he supervised development of the Cabin Creek Field. Prior to that he was secretary, treasurer and general manager of the Fort Harmar Oil Co. until its properties were sold in 1920 to the Henderson Oil Co. Mr. Dye's office will be in the Kennedy Building, Tulsa, where the International Derrick & Equipment Co. maintains headquarters for Oklahoma and Kansas.

Thomas Fuller, formerly manager of the Charlotte, N. C., office of the Westinghouse Electric and Manufacturing Co., has been appointed manager of the Atlanta district office to fill the vacancy caused by the death of H. A. Coles. Mr. Fuller has been identified with many of the big electrical projects of the south.

TWO METER COMPANIES EFFECT CONSOLIDATION

The Bastian-Blessing Co. and the Pittsburgh Equitable Meter Co. have merged their activities in connection with research and development of equipment for the liquefied petroleum gas industry. The Pittsburgh Equitable Meter Co. for years has been a leading manufacturer of regulators and meters in both the utility and oil fields. It will manufacture the regulators for the systems sold by the Bastian-Blessing Co.

Almost at the same time the engineers of these two companies turned their attention to the new liquefied petroleum gas industry. The Bastian-Blessing Co. has designed a number of devices which it is furnishing in this field. The Pittsburgh Equitable Meter Co., with its experience in the design and construction of regulators for natural and manufactured gas, has devoted attention to the development of regulator equipment for these liquefied gases. The regulator required by the industry is of a special nature and plays an important part in the proper operation of the unit sold by the manufacturer of the liquefied petroleum gases. The research and development engineers of the two companies have produced regulators that meet the needs of the industry.

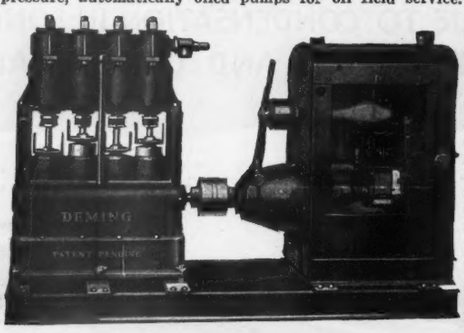
HANLON-WATERS OPENS TEXAS BRANCH OFFICES

Hanlon-Waters, Inc., the newly organized supply company, representing the Reed Air Filter Co., Victaulic Co. of America, and the Fisher Governor Co., with general offices at Tulsa, has opened branch offices in the Post Dispatch Building at Houston, and the Fort Worth National Bank Building at Fort Worth, Tex. G. N. Lamont will be in charge of the Houston office and H. T. Bonar in charge of the Fort Worth office.

M. F. Waters, president of the company, is making an extensive trip through the Mid-Continent and Texas fields, with the intention of opening other branch offices in this territory. In addition this company plans to open offices in the Rocky Mountain and Northwest territories within the very near future. It will manufacture and shortly begin distribution to the oil and gas industry an oil and gas separator, new in principle and design.

THIS PUMP REQUIRES PACKING AGAINST SUCTION ONLY

The Deming Co. of Salem, Ohio, is marketing through jobbers a new line of high-pressure, automatically oiled pumps for oil field service. These pumps are unique in design in that it is necessary to pack against suction only instead of high discharge pressures. The pumping is done by bronze plungers equipped with special high-pressure composition cups, and these plungers work inside of cylinders which are made of seamless brass or stainless steel tubing. The piston rods are of stainless steel, and the plungers are operated by connecting rods and eccentrics which revolve on a stationary main shaft.

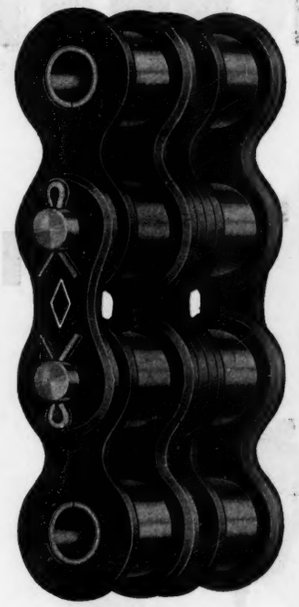


Four-cylinder model, direct-connected to a Novo engine.

These pumps are built in two, three and four-cylinder models covering a range of 10 to 200 barrels per hour at 300 to 500 pounds discharge pressure. They can be driven by flat-belt, Tex-rope, or gear drive, and also direct-connected to gas or gasoline engines by flexible coupling. They are light in weight and are especially adapted for general field service, as they can be used for pumping almost any kind of liquid without changing parts or packing.

HEAVIER, LARGER-PITCH CHAIN MADE BY DIAMOND

To meet the demand for heavier, larger pitch roller chain of Diamond make, the 2½-inch pitch chain shown in the accompanying illustration has been developed by the Diamond Chain and Manufactur-



ing Co., of Indianapolis, Ind. This chain conforms to the A.S.M.E., S.A.E., A.S.M.A. and the American standards. It is similar to the other Diamond roller chains in design, but made for heavy duty applications such as large conveyors, industrial locomotives, etc. For single strand chain, the average tensile strength is 95,000 pounds; maximum horsepower 97 with 19-tooth sprocket; and maximum revolutions per minute 240. It is made in single and multiple strands, transmission capacity and tensile strength being proportional to the number of strands.

FLASHLIGHT CONVENIENT FOR USE IN OIL FIELDS

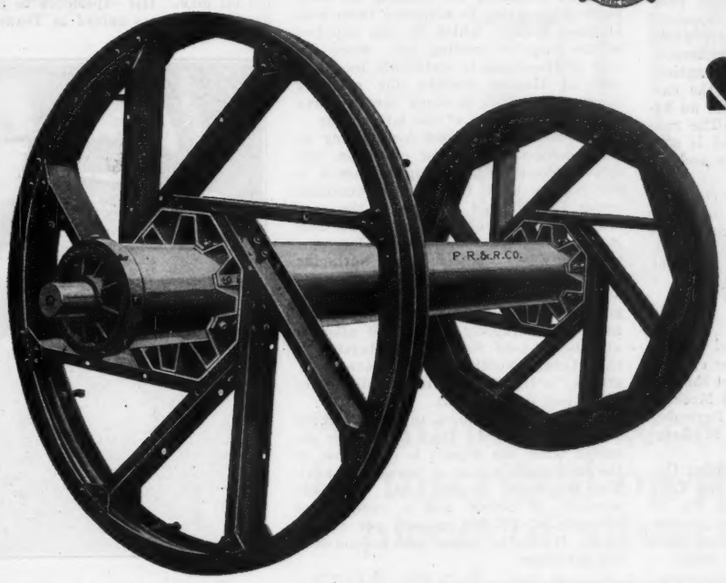
The Delta Electric Co., Marion, Ind., has announced a new Delta "Buddy" flashlight lantern for all flashlight and similar uses. It is 3¾ inches high, and can be carried in the hand, on a belt or in the pocket. It weighs 15½ ounces with batteries installed and the bail and handles fold out of the way. The lantern is made with serrated bail holes so that it can be leaned in any position on its bail. It is operated on two 1¼-inch flashlight cells that are installed without any wiring.

THE DELTA BUDDY ELECTRIC LANTERN
3¾ HIGH 3¼ WIDE 2⅝ DEEP
OPERATES ON TWO STANDARD FLASHLIGHT CELLS
ANY MAKE

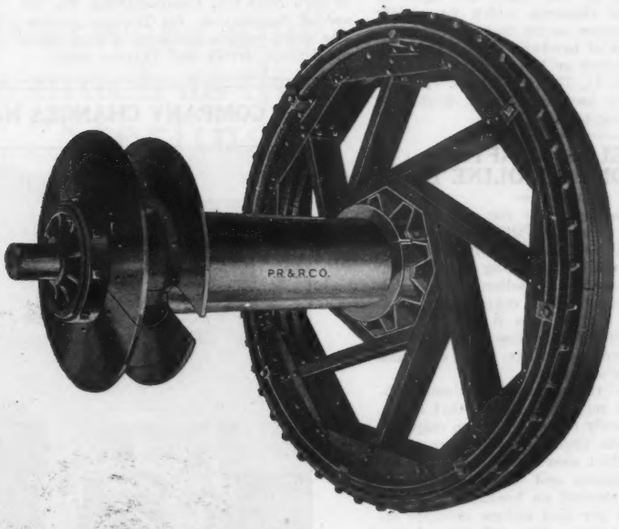
The entire battery-holding mechanism can be pulled out in five seconds, according to the manufacturers, for change of bulb. The bulb carries a screw base for perfect focusing. The lantern is said to project a powerful light, making it useful about the oil field.

PARKERSBURG

Has served the oil fields of the world for 32 years



STEEL BULL & CALF WHEELS



Shafts fabricated from 16"x3/8" wall, 18"x1/2" wall, 24"x1/2" wall and 18"x1 1/8" wall, O. D. pipe.

Gudgeons are pressed into shaft under hydraulic pressure then bolted through shaft and gudgeon band—they can't come loose.

Bull Wheels furnished in 7½ and 8 foot diameters with 9, 12 or 14 inch face brake wheel, Tug Wheel either double or triple groove, channel arms, octagonal hubs made from universal mill plates.

An economical replacement for heavy drilling bull wheels is found in 6 foot diameter wheels with 13 inch O. D. by 5/16 inch wall shaft, 13 foot 6 inches shoulder to shoulder of gudgeons.

Write today for prices.

THE PARKERSBURG RIG & REEL COMPANY

EXECUTIVE OFFICES & MAIN PLANT

PARKERSBURG, WEST, VA.

PARKERSBURG PRODUCTS

Steel Derricks and Steel Crown Blocks	■	Rig Irons (A.P.I. Standard)	■
Chain Driven Sand Reels and Bailing Reels	■	Portable Drilling Machines (Wood and All-Steel)	■
Steel Wheels	■	Bolted Steel Tanks	■
All-Steel Standard Rigs	■	Miscellaneous Drilling Equipment	■

Check the equipment in which you are interested, tear out and return this coupon, with your name and address, to us, and we will send you complete information on the items checked.

EQUIPMENT AND SUPPLIES

PARKERSBURG PUTS NEW BANDWHEEL ON MARKET

A new Parkersburg type M steel bandwheel made by the Parkersburg Rig and Reel Co., Parkersburg, W. Va., has a built-in wood face, fitting it for use with

either friction or chain-driven sand reels. The spokes of the wheel are made of heavy steel channels which fit rigidly over cast bosses on the flanged hub.

This type of bandwheel is offered with 12-inch, 14-inch or 16-inch face, in diameters of 10, 11, 12 and 14 feet. All are adapted for use with either double or triple-tug tug pulleys.

STILL ELASTIC AFTER LONG GASOLINE BATH

Petro-Seal has been put on the market by the Sherwin-Williams Co., Cleveland, Ohio, as an extremely tenacious, heavy-bodied elastic coating that is nonsoluble in naphtha, gasoline or crude oil. The elasticity of this coating, the manufacturers say, enables it to withstand the contraction, expansion and vibration to which storage tanks, tank cars and tankers are subjected.

Tests in the Sherwin-Williams laboratory are reported to show that Petro-Seal effectively resists hydrogen sulphide. Metal panels protected with two coats of this product were immersed in the following solutions and at the end of 30 days they showed no breakdown in the coatings: 1 per cent sodium chloride solution. 1 per cent sodium chloride solution saturated with hydrogen sulphide. Crude oil. Crude oil saturated with hydrogen sulphide. 1 per cent sulphuric acid.

The test was still in progress when the foregoing report was made.

TRADE LITERATURE RECEIVED

The Emsco Derrick and Equipment Co., Los Angeles, Calif., is sending out two bulletins, one on the Emsco Hi-Ten derrick and one on couplings, drill collars, fishtail bits and substitutes. The former gives an interesting story of the development of the Hi-Ten.

The Laclede-Christy Clay Products Co., St. Louis, Mo., issues a bulletin in the form of a Thanksgiving proclamation in which it says it is grateful for the fact that it is celebrating its eighty-fifth anniversary. It also emphasizes the advantages of Laclede fire brick.

A bulletin issued by Wilson-Snyder, Pittsburgh, Pa., describes and illustrates the Wilson-Snyder engine-drive high pressure hot-oil pumps.

KIBELE SWAB DOES NOT PLUG WELL MAKERS SAY

The Kibele production swab, distributed by the Lucey Products Corp., will not plug a well if sent to the bottom, the manufacturers say, owing to a relief valve that unloads at any given pressure. The swab is made especially for heavy loads. The fluid pressure works with, not against, the swab, automatically expanding the rubber firmly against the casing. No metal touches the casing, with the result that there is no bypassing caused by worn parts. The rubber is compounded specially and is said to represent years of experience and research in oil-field work.

The swivel joint, according to the manufacturers, makes it possible to work old and poorly fitted pipe with comparative ease. The swab is asserted to be foolproof because it has few parts and they cannot be incorrectly assembled.

BUSINESS NOTES

Synchronous motors, industrial control, and switchgear equipment will be exhibited by the General Electric Co. at the National Exposition of Power and Mechanical Engineering in New York, December 2 to 7. W. A. Gluesing will be in charge

The Allis-Chalmers Manufacturing Co., Milwaukee, Wis., has appointed the T. B. Wood's Sons Co., Chambersburg, Pa., as special distributors for Texrope drives. The latter concern will carry a large stock of Texrope drives and Texrope belts.

HASCROME WELDING-ROD SELF-HARDENING ALLOY

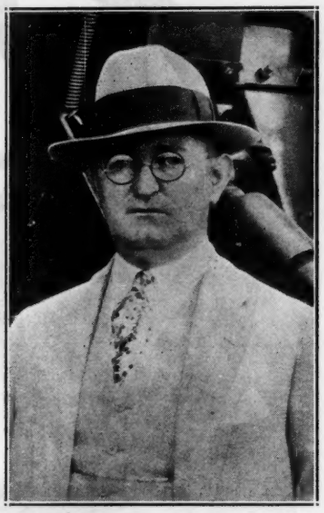
Haynes Stellite Co. of Kokomo, Ind., has placed on the market a manganese-chrome-iron welding rod called Hascrome. This is a self hardening alloy, designed primarily for building up worn parts preparatory to surfacing them with Haynes Stellite, which is also supplied in the form of welding rod. Since the cost of Hascrome is materially less than that of Haynes Stellite, the resulting composite surface is much cheaper than if entirely built up of the latter alloy.

Hascrome may be used for building up large sections of steel or cast iron, and forms a base for Stelliting because it is sufficiently hard to resist deformation under impact, and because of the ease with which Haynes Stellite flows into it. Although in some cases Hascrome alone may be used for hard surfacing parts subject to abrasive wear, it does not possess red hardness to the same degree as Haynes Stellite, and it will wear away more rapidly. The new alloy is also being used for tacking Haystellite, the Haynes Stellite Co.'s diamond substitute, to the cutting and reaming edges of oil well drilling tools.

Hascrome is applied to steel without puddling the steel. Best results are obtained when the deposit is made just so the steel surface is at a "sweating" heat. The Hascrome deposit has a tensile strength of 40,000 and a compressive strength of 177,000 pounds per square inch. It can be forged and ground, but not machined.

IDECO SALES MANAGER IS PRACTICAL OIL MAN

The International Derrick & Equipment Co. has made Carleton J. Anderson sales manager in charge of the machinery division. Mr. Anderson is a practical oil man. His experience in the production field was gained in Texas, Okla-



C. J. Anderson

homa, California, Mexico, British East Indies and South America. He goes to Ideco from the Oil Well Supply Co., of Pittsburgh, where he represented that company as foreign representative for years. He lived abroad continuously from 1919 and visited practically every operating oil and gas field in the world, including Canada, Mexico, Japan, Borneo, Tarakan, Java, Sumatra, Burmah, Assam, Punjab, Persia, Iraq, Egypt, Rumania, Poland, Russia, Germany, France, Spain, Algeria, Trinidad, Venezuela, Colombia, Ecquador, Peru, Bolivia, Argentine and the United States. He is thoroughly acquainted with cable tool and rotary drilling and also with producing equipment used in the United States and foreign countries. Mr. Anderson for the present will reside in Columbus, Ohio.

FLUOR COMPANY CHANGES NAME AND ENLARGES PLANT

The Fluor Corp., Ltd., Los Angeles, Calif., announces large additions to its manufacturing and office facilities simultaneously with the announcement of a change in name from Fluor Construction Co. No change in management or executive personnel of the company has been made, according to P. E. Fluor, general manager.

On a site in Anaheim, Calif., recently purchased by the company, complete offices, small parts store room, garages, machinery, storage warehouses and other buildings, covering approximately two acres, have been erected. This division will handle labor distribution for all jobs under construction, and serve as a storage depot for construction machinery and supplies, as well as a base for the Fluor fleet of trucks. Approximately 200 men are regularly employed in this division.

The original cooling tower manufacturing plant, directly behind the main office building, will remain in its present location, providing direct contact with the personnel of the headquarters division. This plant employs approximately 75 men continuously.

The Fluor Corp., Ltd., recently completed what is said to be the largest single cooling tower in the world for The Texas Company at its Watson refinery. The tower is 18 feet wide, 47 feet high and 840 feet long.

Another installation now under way is a seven-unit high-pressure compressor station for the Barnsdall Oil Co. of California in the Elwood, Calif., Field. The company also is building a four-unit high-pressure compressor station for the Superior Oil Co. at Santa Fe Springs.

NO PROCESSING NEEDED BY BOROD WELDING ROD

Borod, a welding rod which deposits a hard facing of tungsten carbide, has been developed by the Stoody Co., Whittier, Calif. Borod may be applied either electrically or with the oxyacetylene flame, with no more processing nor preparation than is necessary in any welding operation, and the characteristic deposit, according to the Stoody Co., will be found to be of uniform hardness and with uniform resistance to abrasive wear.

Borod is marketed as a welding rod which is ready for use without processing or preparation. The deposit from Borod consists of particles of tungsten carbide, cemented in place by a fused mixture of iron, tungsten-iron alloy and tungsten-iron-carbon alloy.

Perfection of hard facing as a process has been an important agency in oil drilling. With the successful development of a welding rod, which is simple and easy to use, yet which will deposit a superhard overlay, the range of application of hard facing may be greatly increased.

A hundred words might be inscribed on the face of a piece of silverware and yet not say as much as the simple word "Sterling".

A thousand words might be written about the merits of a cementing service and yet not convey as much to the experienced oil man as the word "Halliburton". Here is the standard by which all cementing is measured—the supreme achievement of scientific well protection.

HALLIBURTON OIL WELL CEMENTING CO.
Duncan, Oklahoma

Technical Questions Answered

BY CHARLES K. FRANCIS, PH.D., TECHNICAL EDITOR

This department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with the marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible so as to assure a satisfactory answer.

All inquiries should be signed and if other than the given initials are to be used please indicate the desired letters.

Questions involving patented processes, intricate formulas and calculations and estimates of costs, for obvious reasons, cannot be answered. The replies will appear on this page within a reasonable time.

FRACTIONAL ANALYSES NATURAL GAS AND GASOLINE

Will it be convenient for you to furnish an explanation of the principles and an outline of the method, for the fractional analysis of natural gas and natural gasoline?—R. S. C.

The separation of the different products from petroleum is accomplished by heat on the basis of boiling points. In ordinary refining, the one exception is the separation of wax by cooling and the product is commonly graded on melting point. The more volatile liquids and the hydrocarbon gases may be conveniently obtained in a pure form by gradually lowering the temperature over the range of their boiling points.

It is fortunate that the lower hydrocarbons boil at temperatures quite widely separated; consequently with the proper apparatus and an adequate cooling medium they may be separated or fractionated. Methane boils at minus 265 degrees Fahrenheit, ethane at minus 135 degrees, propane at minus 49 degrees, butane plus 34 degrees, pentane 97 degrees, hexane 156 degrees, heptane 208 degrees.

The apparatus and method has been brought to a high degree of perfection by Podbielniak, see The Oil and Gas Journal, January 17, 1929, and May 16, 1929, and quoting from the article of January 17: "It is based on the use of fractional distillation to separate with sufficient sharpness the more volatile hydrocarbons in natural gas and gasoline and is applicable to the analysis of all gaseous and liquid mixtures within the volatility range corresponding to methane-octane, which are subject to fractionation by distillation, such as the various artificial gases, thermally decomposed gas, combustion products, the volatile portion of motor fuels, etc."

The apparatus was first developed at the University of Michigan by Podbielniak and Prof. E. H. Leslie, the Phillips Petroleum Co. contributing to the expense of the investigation.

The fractionating column is made of Pyrex glass with a cooling chamber at the top and a distilling bulb at the bottom, the latter being electrically heated. Liquid air or any suitable refrigerating agent is blown into a copper cooling vessel immersed in a gasoline bath contained in the cooling chamber. Thermocouples in the vapor space measure the temperature of fractionated vapor and the rate of distillation is controlled by the two-way stopcock which serves as a flow regulating valve. A manometer is provided to measure the pressure in the column and another manometer beyond the regulating stopcock measures the pressure in an evacuated container into which the fractionated vapor is allowed to pass.

The distillate is collected in the vapor form in a container of known volume which is evacuated previous to analysis. The rising pressure in this container as indicated on the right hand manometer shown measures accurately the amount of vapor distilled into it.

EDUCATIONAL COURSES IN PETROLEUM INDUSTRY

Having had some experience in nearly all departments of the oil industry I find myself in need of a better education along engineering lines and I am wondering how best to go about getting it Are evening courses held in any of the universities? Do you know of a suitable school offering an extension course?—C. S. H.

Several of the larger institutions offer extension courses in subjects that would be of value to one desiring more knowledge about engineering and the sciences. A few universities have classes which may be attended at night. You should write to the nearest institution for information about the courses which are available according to your previous education and the time you are prepared to devote to them.

A survey of Schools Perfecting Petroleum Courses was published by Thomas F. Smiley in the Oil and Gas Journal, November 1, 1928, page 34, and he gives the information quoted below about the work given in the several colleges and universities.

A survey made by The Oil and Gas Journal of 132 educational institutions throughout the country reveals that 11 have established full courses in petroleum engineering. These courses provide not alone sound basic training in physics, mathematics, geology and chemistry, but give major work in geological engineering for the student in geology, in petroleum engineering for production and refining, and in mechanical engineering for pipe line work, along with actual field practice that goes far toward narrowing the inevitable chasm that separates the novice from the experienced craftsman. Ten have installed courses which while they cannot be described as complete, nevertheless offer studies designed specifically to prepare young men for positions in the oil industry.

Fifty-one offer scientific courses that give an excellent foundation for specialized work in petroleum. In some cases these courses have been broadened for the express purpose of enabling students better to equip themselves for work in the production, refining and transportation of oil.

The institutions offering complete courses in petroleum are: University of California, Berkeley, Calif.; University of Pittsburgh, Pittsburgh, Pa.; Colorado School of Mines, Golden, Colo.; University of Southern California, Los Angeles, Calif.; Agricultural and Mechanical College of Texas, College Station, Tex.; State College of Washington, Pullman, Wash.; Stanford University, Stanford, Calif.; University of Tulsa, Tulsa, Okla.; University of Minnesota, Minneapolis, Minn.; Missouri School of Mines, Rolla, Mo.; and the University of Oklahoma, Norman, Okla.

PHYSIOLOGICAL PROPERTIES OF HYDROGEN SULPHIDE

Is it known just in what way hydrogen sulphide acts as a poison when breathed in large quantities? How much of this gas is considered to be dangerous to persons? Can hydrogen sulphide be present in gasoline in liquid form?—B.G.S.

Small quantities of hydrogen suphide may be taken into the body without producing any special harm other than a slight headache but in quantities a little more than a trace, it becomes a very active and dangerous poison. When present in large quantities, such as in the gas from some wells, it will cause a smarting of the eyes. This is thought to be the result of the hydrogen sulphide combining with sodium to form sodium sulphide, which is a caustic substance and consequently an irritant. This action may be taken as a danger sign and precautions should be taken to prevent long exposure after this condition is observed.

The action of hydrogen sulphide in the human system involves the formation of sodium sulphide in the respiratory tract and this substance reaches the blood stream where it produces intense irritation. This irritation when confined to the lungs may be the cause of death after several days to a week following the exposure; however, in most cases hydrogen sulphide acts with exceptional rapidity as a general and irritating poison. There are two causes for the irritation; when this gas comes in contact with moist body tissues it combines with the alkaline material, sodium, with the formation of sodium sulphide and irritation is set up both by the fact of this withdrawal and the caustic action of the sodium sulphide. Part of this sulphide is absorbed and enters the blood stream where it is decomposed to form hydrogen sulphide again.

So little as 0.005 to 0.010 per cent will produce slight symptoms of the poison if breathed for several hours and 0.02 to 0.03 per cent is considered to be the maximum quantity that may be breathed for one hour without serious results. Concentrations of 0.05 to 0.07 per cent are dangerous to breathe for over 30 minutes and 0.1 to 0.3 per cent will act very quickly as a fatal quantity.

Hydrogen sulphide is soluble to some extent in gasoline and could be present in this product, but the conditions to reduce hydrogen sulphide to liquid form are either high pressures or very low temperatures. Hydrogen sulphide becomes a liquid at ordinary temperature under a pressure of 250 pounds to the square inch and may be liquefied without pressure if the temperature is reduced to below minus 79° F. The common treatment of gasoline and the characteristic odor of hydrogen sulphide, not to mention standard specifications, would exclude this substance from gasoline.

MANUFACTURE OF PARAFFIN WAX

What are the necessary steps in the separation and purification of wax from petroleum? A short outline or explanation of the manufacturing process would be appreciated.—E.L.

The manufacture of paraffin wax requires a broad knowledge of the properties of the different petroleum products, how they behave under various conditions, together with economical application of all principles involved. In general petroleum products are obtained from the crude oil by the application of heat, that is distallation. The different fractions constitute the products, such as gasoline, kerosene, lubricating oil, etc., that are obtained at increasingly higher temperatures. The separation of wax is one of the exceptions to the use of heat in this manner, because it is obtained by the withdrawal of heat from the lubricating oil distillate that has been distilled from the crude oil.

The lubricating oil distillate which has not been freed from the wax is known as wax distillate, because the wax is in solution in the oil. The extraction of the wax takes place in four stages—cooling or chilling, pressing, sweating, and moulding or packing. The object of the chilling operation is to cause the formation of wax crystals at the low temperature furnished by a refrigerating system. Cold brine is circulated in coils. The cooling system consists of double pipes, the wax distillate is in the inner pipe and the brine in the outer one.

The chilled wax distillate is pumped into large leaf filter presses which are operated under a pressure of approximately 350 pounds per square inch in a cold room. The oil is forced through canvas so that the wax crystals are held on the cloth and the oil passes through. The wax is removed from the cloth, and in this form is called slack wax. This is melted and then pumped to the sweaters.

The sweaters consist of a series of pans, each of which contains coils of pipe set in above a screen. Water is run into the pans and the slack wax pumped onto it. The pans are installed one above the other in a room which may be alternately cooled and heated. Cold water is run through the coils to cause the wax to solidify. Next the cooled water below the wax cake is drawn off, leaving the wax on the screen. Then the temperature is slowly raised so that oil and low melting point waxes run or drain from the wax cake. This sweating operation may be repeated a number of times until wax of the desired melting point and purity is obtained.

The product as received from the sweaters is known as crude scale wax, which may be further refined by chemical treatment and filtering while in the liquid form. Finally the product may be moulded in cakes or packed in barrels or bags for shipment.

GERM PROCESS FOR MAKING LUBRICATING OILS

Will you give a description of the Germ Process for making lubricating oil? What is the principle involved which makes it different from the usual methods and does it produce a superior product?—A.T.

The original presentation of what is known as the "Germ Process" was made by Wells and Southcombe in the Journal of the Society of Chemical Industry, Vol. 39, p. 51T, 1920, under the title The Theory and Practice of Lubrication: The "Germ" Process. While introducing the subject these authors quote the statements which had been made by other experts concerning the principles of lubrication. It was known that the lubricating function of an oil depended on some uncertain property; also vegetable and animal oils were known to be more silppery, and that what makes oiliness had not been determined. Any liquid to have lubricating value must "wet" a solid surface.

Surface tension experiments indicated that interfacial tension against water of the vegetable and animal oils is much lower than in the case of a mineral oil. After considerable experimentation these investigators proved that the lowering of the interfacial tension against water in the case of fatty oils was due to their slight content of free fatty acidity. By

(Continued on Page 109)

API
SPECIFICATIONS
TIPPETT DRILLING COMPANY
OIL AND GAS WELL CONTRACTORS
SHREVEPORT, LA.
May 23rd, 1929
The Brewster Company Inc.,
Shreveport, Louisiana
Gentlemen:
In reply to your request for information regarding the 4 inch Tool Joints purchased from you some time ago.
We wish to say we have drilled 4800 feet with this string of joints in some of the hardest drilling in the state of Arkansas, and found them perfectly satisfactory in every particular. We believe there are no better tool joints made than your API Tool Joints.
Yours very truly,
TIPPETT DRILLING COMPANY,
By J.C. Tippett
JCT/L.

Complete stock carried at these Warehouses:
Red Ball, Inc., 2-4 East California St., Oklahoma City, phone W-3680
Houston Store, 2000 Harrison St., phone Capitol 3021

Distributors: Wilson Supply Co., Houston, Beaumont and Luling, Texas; Murray-Brooks Hardware Co., Lake Charles, La.; T. T. Word Supply Co., Houston, Texas, and Lake Charles, La.; The Ellis Iron Works, Inc., El Dorado, Ark.

Exclusive Export Agents: The W. K. M. Co., 74 Trinity Place, New York, N. Y.

Ask about other Brewster A.P.I. Products: Perfection Core Barrels; Drill Collars; Fish Tail and Special Gumbo Bits; Special Rock Bits; Core Barrel Cutter Heads for both soft and hard formations. (Cutter Heads for hard formations are faced with a substance of diamond-like hardness.)

The Brewster COMPANY~INC.
SUCCESSORS TO OIL CITY IRON WORKS INC.
Shreveport, Louisiana

Oklahoma Gross Production, Third Quarter

Gross production report of Oklahoma for third quarter of 1929, giving all royalty with a value of $2,000 and upwards and production of a value of $5,000 and more during that period. Names appearing with asterisk represent royalty, those without represent production.

A

Name and address—	No. bbls. oil	M. ft. gas	Amount
Accumulative Royalties Corp.,* Tulsa	.....	.....	$10,353.33
Atlantic Oil Producing Co., Dallas, Tex.	46,650.53	551,705	40,804.54
Atlantic Oil Producing Co. (suspense),* Dallas, Tex.	.....	.....	2,322.67
Atlantic Oil Producing Co., Dallas, Tex.	321,392.74	.....	471,904.24
Atlantic Oil Producing Co.,* Dallas, Tex.	20,972.99	5,264	33,031.43
American Oil Development Co., Pittsburgh, Pa.	4,811.74	.....	6,915.18
American Refining Properties, Wichita Falls, Tex.	4,307.58	.....	6,953.10
American Oil Royalty Seminole Corp.,* Tulsa	.....	.....	4,486.14
American Maracaibo Co., New York City	8,563.52	.....	15,842.53
American Oil & Refining Co., Oklahoma City	.....	.....	13,329.84
American Indian Royalties, Inc.,* St. Louis, Mo.	.....	.....	22,652.20
Adamson, Peter, Jr., Tulsa	.....	.....	22,219.29
Adams Royalty Corp.,* Chicago, Ill.	60,846.14	.....	106,726.88
Adams Royalty Corp.,* Chicago, Ill.	.....	.....	3,393.61
Associated Royalty Corp.,* New York City	.....	.....	6,641.09
Amerada Petroleum Corp., Tulsa	814,139.64	.....	1,281,013.09
Amerada Petroleum Corp., Tulsa	.....	1,357,434	47,103.44
Amerada Petroleum Corp.,* Tulsa	2,082.52	9,619	3,814.43
Alma Royalties Corp.,* New York City	.....	.....	18,235.27
Aubyrne Oil & Gas Co., Chickasha	2,140.90	.....	4,011.09
Arnold, H. Y.,* Tulsa	.....	.....	2,208.61
Apple, S. A.,* Oklahoma City	.....	.....	18,485.37
Allen, W. O.,* Tulsa	.....	.....	2,243.70
Ames, Ben A., Oklahoma City	4,235.40	.....	6,345.28
Anderson, Nettie H., Charles and Wilmer,* Los Angeles, Calif.	3,376.80	.....	3,094.18
Andrews, Walter,* Weslaco, Tex.	.....	.....	2,865.64
Andrews, H. N. and Ethel B.,* Newkirk	.....	.....	6,968.47
Andrews, now, Martha Nadine Tully,* Muskogee	.....	.....	3,119.52
Abraham, Joe, estate,* Bristow	.....	.....	8,529.91
Atkinson, William H.,* Oklahoma City	.....	.....	3,932.95
Anthis, Ernest R.,* Muskogee	.....	.....	2,568.48
Adcock, A. D.,* Okmulgee	.....	.....	[illegible]
Altom, B. N.,* Tonkawa	.....	.....	7,340.21
Alco Royalty Corp., Tulsa	.....	78,411	8,423.83
Alma Petroleum Co., Oklahoma City	1,056.57	60,083	5,701.84
Ayer, Richard E.,* Flushing, N. Y.	.....	.....	3,065.81
Amster, N. L., Ardmore	5,690.00	.....	8,358.67
Anthony, S. W., Mounds	.....	.....	5,600.96
Apex Royalty Co.,* St. Louis, Mo.	.....	.....	18,596.18
Arkansas Fuel Oil Co., Shreveport, La.	6,288.06	.....	7,188.49
Armor Oil & Gas Co., Duncan	3,283.04	.....	6,073.62
Allison, Mary Sue,* Brooklyn, N. Y.	.....	.....	3,116.44
Argo Oil Co., Denver, Colo.	31,022.78	.....	53,375.63
Atlas Royalties Corp.,* Tulsa	.....	.....	5,033.89
Associated Royalty Corp.,* New York City	.....	.....	28,051.80
American Royalty Petroleum Co.,* Tulsa	2,382.95	.....	4,157.75

B

Bridgeford, J. R., & Co., New York City	.....	.....	5,236.68
Bay State Oil & Gas, Kansas City, Mo.	1,528.91	.....	2,368.63
Bay State Oil & Gas, Kansas City, Mo.	9,425.02	.....	15,088.58
Bay State Oil & Gas, Kansas City, Mo.	1,981.11	.....	2,954.48
Baltic Operating Co., Bartlesville	3,616.20	.....	3,805.32
Barnsdall Oil Co., Tulsa	1,965,360.64	.....	1,482,881.10
Barnsdall Oil Co., Tulsa	.....	901,452	40,526.09
Barnsdall Oil Co.,* Tulsa	1,998.22	.....	2,713.02
Barnsdall Refining Co. (suspense),* Tulsa	.....	.....	9,130.01
Bart Royalty Co.,* Bartlesville	6,200.65	.....	9,697.76
Brown, A. C., Oil Enterprise, St. Louis, Mo.	3,979.33	.....	5,372.09
Brown, S. J.,* Duncan	.....	.....	2,738.50
Brown, L. A. and Mary L.,* Shawnee	.....	.....	6,842.57
Brown, J. J., Jr.,* Wichita Falls	.....	.....	4,602.67
Beard, J. G., and S. I. Kolb, Duncan	4,084.74	690	7,534.73
Beard, J. G.,* Duncan	1,693.74	.....	2,504.08
Britton-Johnson Oil Co., Tulsa	5,616.61	.....	6,181.50
Brittain, W. L.,* Oklahoma City	.....	.....	2,793.61
Billings, W. S.,* Enid	.....	.....	1,996.73
Billings, E. M., Henryetta M. and M.,* Enid	.....	.....	2,130.74
Billington, C. B.,* Shawnee	.....	.....	36,066.95
Bridwell Oil Co., Wichita Falls, Tex.	8,406.01	.....	11,276.23
Mabel Gray Breene, Tulsa	4,540.53	.....	6,363.67
Breene, Mabel Gray, Tulsa	4,540.53	.....	6,363.67
Bole, George S., Tulsa	10,019.94	17,362	15,860.57
Bole, George S.,* Tulsa	1,467.96	2,158	2,630.57
Buttram, Frank,* Oklahoma City	.....	.....	18,820.57
Buttram, Frank, Oklahoma City	2,166.42	.....	3,325.87
Belco Royalties, Inc.,* New York City	.....	.....	53,672.70
Braden & Moore, Tulsa	6,398.67	.....	9,086.99
Braden & Moore, Tulsa	.....	Gas	355.00
Bell Oil & Gas, Tulsa	3,530.16	.....	5,689.51
Bumpass, J. M.,* Duncan	.....	.....	2,369.33
Bradley, E. A., and Anna, Tulsa	5,131.97	.....	6,784.54
Brandenburg, John B. & Michall, & Sons,* Norman	.....	.....	3,902.61
Branden urg Brothers,* Norman	.....	.....	34,339.01
Beaver Oil Co., Enid	2,385.61	.....	5,520.30
Buchner, Guy M.,* Holdenville	.....	.....	2,936.44
Buckner, Roy,* Wewoka	.....	.....	2,088.90
Baker, T. J.,* Okmulgee	.....	.....	2,734.69
Baker, T. J., by Central National Bank, trustee, Okmulgee	.....	.....	2,748.26
Baker & Strawn, Tulsa	8,456.04	320	10,718.63
Bissett, Lytle & Gray, Tulsa	8,799.24	.....	11,839.52
Bissett, Lytle & Gray, Tulsa	6,188.11	.....	7,775.83
Barbara Oil Co., Oklahoma City	7,362 77	31,801	12,096.90
Bullock, V. M.,* Shawnee	.....	.....	7,034.51
Bird, J. W., and William Hanley, Bradford, Pa.	4,918.92	.....	6,713.06
Baldwin & Sultan, Walters	13,048.72	.....	18,996.54
Berry Petroleum Co., Tulsa	10,213.78	.....	13,743.34
Berry Petroleum Co., Tulsa	.....	Gas	1,102.80
Berry, G. M.,* Pawnee	.....	.....	7,028.43
Berry, I. G., and Claude M. Tyler,* Shawnee	.....	.....	4,345.75
Berry, Thomas N. and Harriett,* Stillwater	.....	.....	10,335.12
Banta, D. D.,* Tecumseh	.....	.....	2,041.44
Brame, I. L.,* Los Angeles, Calif.	.....	.....	2,392.37
Boring, O. M., and Effie,* Hobart	.....	.....	35,621.31
Bagwell, Eula M.,* Tulsa	2,115.57	.....	2,828.65
Banta, William M.,* Tulsa	.....	.....	4,326.02
Bodkin, Margaret C.,* Maud	.....	.....	3,042.78
Blake, M. B.,* Oklahoma City	.....	.....	24,875.33
Becktel, E. R.,* Blackwell	1,250.76	.....	2,132.27
Beverlin, F .A.,* Wichita, Kans.	.....	.....	12,404.03
Bennett, John B.,* Ardmore	.....	.....	2,346.86
Bixby, Ina Gardner,* Marshall	.....	.....	13,039.71
Burk, George T.,* Shawnee	.....	.....	2,237.11
Barnum, Robert F.,* Natchez, Miss.	.....	.....	2,589.98
Broyles, W. O.,* Stillwater	.....	.....	2,259.81
Buck, William,* Wetumka	.....	.....	4,829.85
Bryan Petroleum Co., Tulsa	18,471.21	15,148	33,111.74
Burlingame, C. E., Corp., Bartlesville	4,437.21	.....	7,022.90
Braman Oil Co., Inc., Tulsa	3,594.05	.....	7,881.61
Blank, E. J.,* Cushing	.....	.....	6,776.54
Berryhill, Earle,* Sapulpa	.....	.....	3,412.88
Braun, James, Bartlesville	.....	.....	6,462.44
Bailey, J. V.* (paid by Shell Petroleum)	.....	.....	2,429.67
Burrouchs, O. W.,* Shawnee	.....	.....	5,112.09
Babcock Brothers, Denison, Tex.	.....	.....	13,130.17
Blasdel, May,* Blackwell	.....	.....	2,622.76
Bowlegs, Lulu,* Wewoka	.....	.....	3,509.59
Benedum-Trees Oil Co., Pittsburgh, Pa.	15,748.99	.....	23,250.83
Buck, J. F.,* Shawnee	.....	.....	2,085.31
Blackwell Oil & Gas, Cushing	Oil	.....	570,240.95
Blackwell Oil & Gas, Cushing	.....	Gas	5,092.49
Burkhalter, L. J.,* Blackwell	.....	.....	2,626.72
Burke-Greis Oil Co., Tulsa	148,218.79	.....	229,126.01
Burke-Greis Oil Co., Tulsa	.....	Gas	30,004.31
Burke-Greis Oil Co.,* Tulsa	6,989.66	.....	15,157.06
Brown, W. E.,* Tulsa	1,883.56	.....	3,194.63
Bridgman, F. R.,* London, Ohio	3,333.07	.....	4,122.96
Bell, Thomas D.,* Kiowa	.....	.....	2,447.16
Boggs, Charles W.,* Los Angeles, Calif.	4,190.65	13	5,365.78
Barrett, Mrs. Mary F.,* Austin, Tex.	1,831.11	.....	2,655.22

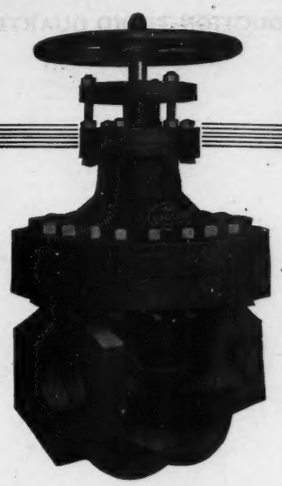
C

Campbell, Mrs. Allis,* Seminole	.....	.....	5,709.93
Cudahy Oil Co., Cleveland, Ohio	12,356.85	.....	15,306.67
Coline Oil Corp., Oklahoma City	294,138.46	869,678	488,867.14
Coline Oil Corp., for Helen B., R. B. and Horace Olds, Charles City, Iowa	42,019.78	.....	69,838.16
Critchlow, W. S., Ardmore	8,169.95	.....	12,655.75
Crosbie, J. E., Inc., Tulsa	70,124.11	.....	108,612.13
Commercial Drilling Co., Tulsa	4,392.82	.....	5,653.92
Commercial Drilling Co.,* Tulsa	1,924.31	.....	3,212.31
Central Royalty Co.,* Tulsa	.....	.....	2,934.00
Central Valley Oil Co.,* Cleveland, Ohio	.....	.....	16,744.81
Central Petroleum Co., Tulsa	6,620.22	.....	9,604.60
Central States Producing Corp., Tulsa	.....	209,717	16,865.32
Central Oil Royalties, Inc., New York City	.....	.....	4,347.94
Cities Service Gas Co., Bartlesville	.....	.....	58,775.52
Consolidated Gas Utilities Co., Oklahoma City	1,537.38	446,065	36,673.17
Cosden, J. S., Inc. of Oklahoma, Fort Worth, Tex.	460,604.53	.....	765,105.45
Creo Oil Co., Tulsa	6,244.14	.....	8,010.99
Cortez Oil Co., Tulsa	5,694.78	.....	9,686.33
Comar Oil Co., St. Louis, Mo.	645,144.62	.....	1,125,993.98
Comar Oil Co., St. Louis, Mo.	.....	558,933	41,486.90
Continental Royalty Corp., Royalties Syndicate, Inc.,* Tulsa	2,156.03	.....	3,524.80
Continental Oil & Refining Co., Independence, Kans.	5,365.13	.....	7,086.94
Colihe Oil Co., Oklahoma City	40,830.55	.....	36,083.06
Colonial Royalty Co.,* Tulsa	.....	.....	4,571.79
Columbia Royalty Co.,* Tulsa	.....	.....	5,624.80
Chiefton Royalty Corp.,* Tulsa	3,480.59	.....	5,778.04
Conservation Oil Co., Tulsa	6,483.89	.....	9,477.29
Commonwealth Trust Co., Okmulgee	4,854.43	.....	6,216.61
Canadian Royalty Co.,* London, Ontario Canada	.....	.....	5,973.17
Caddo Oil Co., Tulsa	25,464.59	.....	34,864.31
Carter Oil Co., Tulsa	2,813,665.12	.....	4,130,649.72
Carter Oil Co., Tulsa	.....	6,077,120	349,797.36
Carter Oil Co., Tulsa (Royalty, suspense)	.....	.....	12,802.87
Carter Oil Co., Tulsa, (Royalty, suspense)	.....	.....	7,580.81
Carter Oil Co., Tulsa (suspense)	.....	.....	69,339.05
Carter, Joe,* Wewoka	.....	.....	3,759.48
Clubb, I. M.,* Kaw City	5,748.75	.....	9,575.89
Clubb, Laura A.,* Tulsa	5,748.73	.....	9,589.28
Caudill, Samuel J.,* Tulsa	1,427.22	.....	2,286.30
Crews Estate Oil & Gas, Enid	7,507.83	10,795	15,291.07
Crews, L. E., heirs,* Enid	.....	.....	2,025.67
Crenshaw, Mrs. Gordon P.,* Jonesboro, Ark.	.....	.....	11,510.62
Crenshaw, Gordon P.,* Jonesboro, Ark.	.....	.....	10,594.67
Cornell, H. D., trustee, Tulsa	3,317.92	.....	6,238.91
Cornell, H. D., trustee,* Tulsa	1,960.86	.....	3,404.82
Cromwell-Franklin Oil Co., Oklahoma City	73,435.59	.....	120,173.43
Clover, Mrs. Goldie R., grd.,* Tulsa	2,094.87	.....	2,831.50
Clover, Jack M.,* Tulsa	2,094.87	.....	2,831.50
Clover, Mrs. Goldie R.,* Tulsa	2,094.87	.....	2,831.50
Colsau Oil Co., Tulsa	4,751.15	.....	5,710.42
Chapman, Fred A.,* Ardmore	.....	.....	5,680.02
Cells, L. D.,* Mannford	.....	.....	2,793.13
Cecil, W. H.,* Tecumseh	.....	.....	3,435.41
Cochran, A. D.,* Okmulgee	5,011.72	.....	8,473.06
Cox, Anna Elizabeth,* Ardmore	.....	.....	4,013.10
Cox, Edwin B.* and Jake L. Hamon, Ardmore	.....	.....	12,478.28
Crane, T. R., trustee,* Mannford	16,459.85	.....	22,252.82
Cary, John I, Okmulgee	.....	.....	16,409.02
Chisum, W. C., Jr.,* Oklahoma City	2,993.82	.....	4,809.91
Chisum, W. C., Jr.,* Oklahoma City	2,993.82	.....	4,809.91
Chisum, W. C., Sr.,* Oklahoma City	2,981.71	.....	4,791.13
Colvert, W. H.,* Marshall, Mo.	.....	.....	3,384.00
Coker, Eudle,* Seminole	2,621.31	.....	4,078.09
Chesnut, O. G.,* Oklahoma City	.....	.....	2,336.06
Campbell, J. D.,* Seminole	.....	.....	22,939.48
Cowden, Robert A.,* Shawnee	.....	.....	5,422.28
Castleman, Margaret W.,* Louisville, Ky.	.....	.....	2,754.81
Castleman, S. T.,* Louisville, Ky.	.....	.....	2,320.06
Connelly, G. W., Caney, Kans.	.....	.....	8,870.03
Canary, S. C., Tulsa	6,331.16	.....	8,368.84
Conyers, Clarissa D.,* Covington	.....	.....	2,073.10
Culbertson, R. R.,* Maud	.....	.....	7,948.49
Carmichael, Dorothy,* Tonkawa	.....	.....	3,023.15
Carpenter, H. C.,* Elizabeth, N. J.	.....	.....	2,253.69
Cherry, C. C.,* Maud	.....	.....	8,671.61
Cherry, L. L.,* Lindsay	.....	.....	5,471.01
Cherry, Clara,* Shawnee	.....	.....	2,158.69
Cherry, V. H.,* Lindsay	.....	.....	5,232.89
Creach, E. R.,* Wewoka	.....	.....	10,123.91
Crockett-Hayes, Mrs. Elizabeth R., Oklahoma City	3,022.44	.....	4,481.08
Castlebury, John,* Asher	.....	.....	2,532.27
Clark and Cowden,* Duncan	.....	.....	7,523.51
Champlin Refining Co., Enid	237,204.71	.....	402,124.68
Champlin Refining Co., Enid	.....	Gas	29,834.37
Cline, William S.,* Newkirk	.....	.....	2,796.24
Cline, William S., trustee,* Newkirk	.....	.....	2,490.44
Crosbie, J. E., Inc., Tulsa	4,013.76	.....	5,035.54
Casperson, Joe, Tulsa	2,776.81	.....	5,174.67
Cumberland Petroleum Co., Cleveland, Ohio	4,847.91	.....	5,574.52
Conwell, Lee R.,* New York City	.....	.....	2,090.78
Central Commercial Oil Co.,* Tulsa	4,116.19	.....	6,435.76
Continental Oil Co., Ponca City	622,829.46	1,148,241	1,035,669.02
Cherokee Warren Oil & Gas, paid by Tidal Oil Co., Tulsa	8,387.50	.....	10,483.59
Clark, Maurice G.,* Muskogee	.....	.....	2,274.38
Clark, H. E., Tulsa	.....	.....	17,183.75
Clark, Dillard H., Jr.,* Ponca City	.....	.....	3,337.90

D

Day, J. F.,* Earlsboro	1,934.20	.....	3,230.01
Day, Annie,* Earlsboro	3,068.44	.....	4,793.84
Dolgoff, James L. and Stratfield Royalty Co.,* New York City	.....	.....	2,364.00
Deaner, J. J.,* Okmulgee	1,295.48	.....	2,214.44
Deaner, J. J.,* Okmulgee	11,463.78	.....	18,419.58
Deep Rock Oil & Refining Co., Tulsa	24,131.86	157,478	39,691.32
Delmar Oil Co., Bartlesville	15,243.30	.....	22,409.95
Delmar Oil Co., Bartlesville	.....	11,171	111.71

(Continued on next Page)



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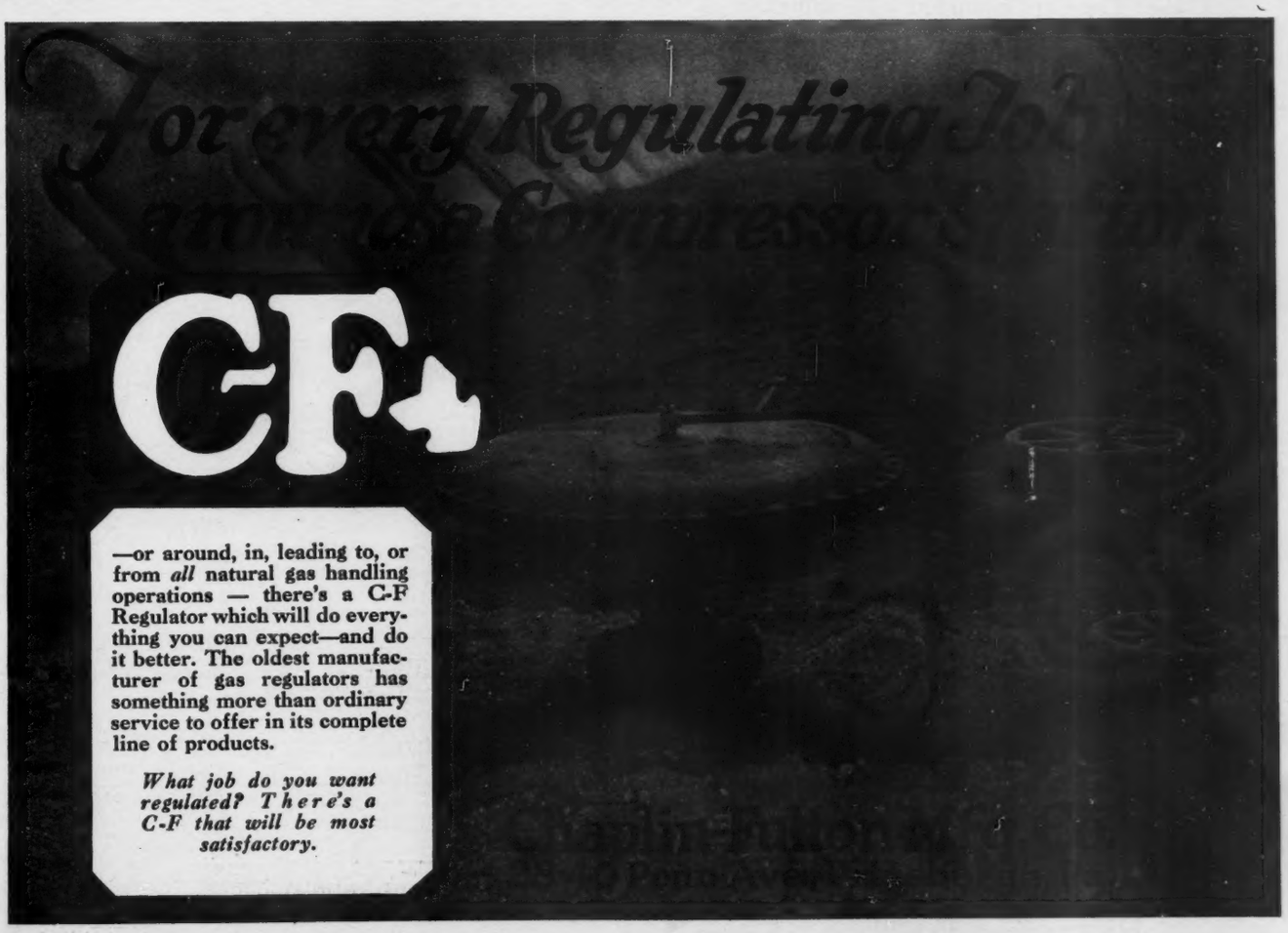
KANSAS CITY CHICAGO NEW YORK BOSTON PITTSBURGH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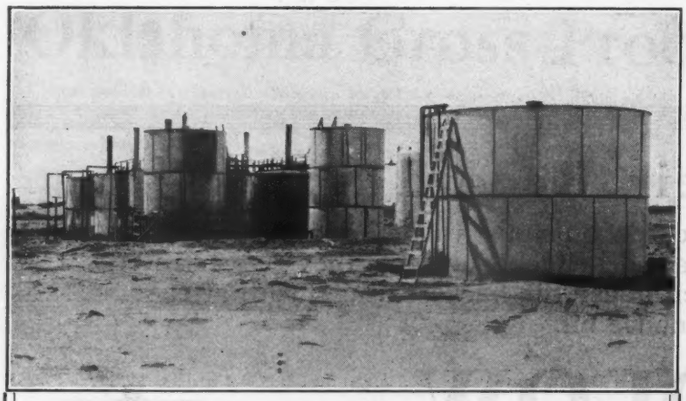

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MALONEY ALONE

OKLAHOMA GROSS PRODUCTION THIRD QUARTER

Name and address—	No. bbls. oil	M. ft. gas	Amount
Delmar Oil Co., Bartlesville	.....	Gas	2,848.04
Darby Petroleum Corp., Tulsa	.....	Gas	34,400.67
Darby Petroleum Corp., Tulsa	569,839.51	.....	882,651.80
Darby Lynde Co., Tulsa	64,781.06	9,288	104,633.40
Dickson Oil Royalty Co.,* Tulsa	.....	.....	6,331.86
Dixon, J. D.,* Duncan	1,589.89	.....	2,141.20
Dickson, L. J.,* Tulsa	7,037.41	.....	11,130.50
Doneghy, J. C.,* Tulsa	17,378.21	.....	29,999.09
Dillard, J. H., estate,* Ardmore	.....	.....	6,359.26
Dillard, Mrs. V. E.,* Ardmore	.....	.....	8,205.51
Duff, D. B., Cleveland, Ohio	.....	.....	9,171.60
Dillon, Mrs. M. H.,* Jonesboro, Ark.	.....	.....	11,510.62
Zackey, Dollie, nee Dindy,* Clearview	.....	.....	2,438.19
Dilley, W. Y., trustee,* Waurika	4,089.19	.....	3,974.85
Dallas Co., Tulsa	.....	.....	5,364.41
Dings, P. C.,* Chicago, Ill.	1,845.02	.....	2,142.97
Duncan, U. T.,* Blackwell	.....	.....	2,050.73
Douglass, O. H.,* Okmulgee	.....	.....	7,908.92
Dixie Oil Co., Inc., Shreveport, La.	153,611.60	106,919	247,806.04
Doss Oil Royalty Co.,* Oklahoma City	13,109.30	.....	18,866.45
Duncan Wichita Falls Pipe Line Co., Wichita Falls, Tex.	20,471.34	.....	32,600.71
Douglas Oil Co., Tulsa	.....	.....	3,601.67
Denver Producing & Refining Co., Okmulgee	21,898.61	.....	34,356.18
Denver Producing & Refining Co.,* Okmulgee	42,656.98	.....	66,489.15
Douglas, M. S.,* Weleetka	.....	.....	3,656.57
Davis, B. F.,* Wewoka	.....	.....	55,227.79
Davis, Earl,* Tulsa	.....	.....	4,926.14
Davis, E. D., Oil Co., Oklahoma City	.....	.....	7,124.08
Davis, Clement,* Shawnee	.....	.....	4,434.54
Davis, Joseph D., Tulsa	3,749.61	.....	5,946.05
Delaware Consolidated Oil Co., Tulsa	47,921.19	.....	59,159.57
Delk Investment Corp.,* St. Louis, Mo.	2,220.58	.....	3,932.08
Denny, C. E.,* Alma	.....	.....	2,861.84
Devonian Oil Co., Tulsa	269,669.31	.....	443,980.72
Devonian Oil Co., Tulsa	.....	Gas	3,391.14
Dickson, J. H.,* Tulsa	31,464.50	.....	50,308.68
E			
Enfisco Oil Corp., Tulsa	5,428.36	.....	6,741.77
Empire Oil & Refining Co., Bartlesville	737,887.21	.....	1,180,611.59
Empire Oil & Refining Co., Bartlesville	.....	.....	85,199.58
Empire Oil & Refining Co., Bartlesville (suspense)	.....	.....	107,059.96
Eastern Royalties Corp.,* New York City	.....	.....	8,553.89
Elm Oil Co., Tulsa	8,051.05	15,935	11,404.84
Elm Oil Co.,* Tulsa	2,052.63	134	3,192.79
Eason, T. T.,* Enid	2,462.62	.....	4,986.60
Eason, T. T., Enid	2,799.97	.....	4,116.52
Eagle Gasoline Co., C. G. Tibbens, Tulsa	.....	Gas	6,106.87
Eagle Picher Lead Co., Henryetta	2,535.34	35,802	5,958.99
Ellison, W. H.,* Pauls Valley	.....	.....	2,670.72
Ellison, Grace B.,* Okmulgee	1,442.61	.....	2,452.34
Enid Bank & Trust Co., trustee, Enid	.....	.....	6,176.87
Elliott, Anna May,* Lawrence, Kans.	.....	.....	8,690.21
Elliott and Vensel, Tulsa	6,072.89	.....	7,242.71
Ellis, Lea R., Tulsa	.....	.....	3,500.90
Ellis Drilling Co., Wichita Falls, Tex.	4,328.01	2,396	7,162.65
Elswick, P. C.,* Lamont	.....	.....	8,241.60
Engineers Royalties, Inc.,* New York City	.....	.....	9,232.59
Equitable Royalties Corp.,* Oklahoma City	.....	.....	23,136.11
Exchange Trust Co., Tulsa	.....	.....	25,015.05
Erlewine, A. J., et al, Wilson	6,708.97	.....	8,844.83
Elliott and Smith, Tulsa	4,561.19	.....	6,048.03
Eckholdt, Arthur,* Lipisstrasse, Dresden Germany	.....	.....	2,972.68
F			
Forsyth, Rufus,* Deer Creek	.....	.....	2,820.26
Foster, James F., Anthony, N. Mex.	.....	.....	4,302.29
Foster Oil Co., Tulsa	.....	.....	10,208.11
Foster Petroleum Corp., Bartlesville	292,667.17	.....	454,935.57
Foster Petroleum Corp.,* Bartlesville	31,511.20	.....	49,096.52
Foster & Davis, Inc., Bartlesville	8,790.31	.....	12,432.16
Fleet, John,* Ada	.....	.....	3,118.00
Fleet, Alice,* Ada	.....	.....	2,400.66
Fleet, Alice, Gdn.,* Ada	.....	.....	5,417.33
Fleet, D. F.,* Ada	.....	.....	26,379.66
Fern Oil & Gas Co., Yale	6,254.63	.....	9,389.77
Fern Oil & Gas Co., Yale	4,423.72	.....	7,111.41
Folk, H. B.,* Sand Springs	2,385.88	.....	3,898.18
Fannell, K. C.,* Chickasha	.....	.....	3,279.37
Five States Roy. Inv. Co.,* New York City	.....	.....	4,551.58
Five States Roy. Inv. Co., New York City	.....	.....	15,965.13
Freed, Gertrude M.,* New York City	.....	.....	2,241.77
Fried, Samuel, estate,* Sulphur	.....	.....	10,146.78
Frierson, A. M., trustee, Bristow	.....	.....	6,030.00
Fortson, Mrs. Effie M.,* Oklahoma City	.....	.....	18,114.89
Fort Ring Oil & Gas, Fort Worth, Tex.	6,994.52	1,090	11,159.97
Frazier, G. W.,* Kingfisher	.....	.....	4,196.03
Findley, E. G.,* Cleveland	.....	.....	3,810.39
Flynn Oil Co., Oklahoma City	6,311.28	.....	9,482.92
Franchot, D. W., & Co., Tulsa	31,788.46	.....	50,094.33
Farmers State Bank, trustee,* Garber	.....	.....	2,079.85
Fitzgerald, D. C., trustee, Ardmore	5,169.54	.....	6,950.97
Fitzgerald, D. C., trustee,* Ardmore	1,553.59	.....	2,155.49
Franklin, Wirt, Petroleum Corp., Ardmore	248,427.61	.....	320,049.73
Franklin, Wirt, Petroleum Corp., Ardmore	.....	Gas	3,324.74
Franklin, Wirt, Ardmore	72,564.32	.....	118,680.11
Franklin, Wirt,* Ardmore	.....	.....	14,610.27
Franklin, Wirt, by Liberty Natl. Bank, Ardmore	3,800.76	.....	5,003.41
Franks, W. H.,* Seminole	.....	.....	11,141.57
Franks, Rosa,* Seminole	.....	.....	7,227.87
Fowler, A. M.,* Wewoka	.....	.....	2,714.56
Fox Royalty Co.,* Tulsa	4,134.21	.....	4,527.31
Fox Royalty Co., Tulsa	5,653.97	.....	6,553.46
Franklin, Wirt, and Mary C. Cates, paid by Liberty Natl. Bank, Oklahoma City	2,077.81	.....	2,813.19
Fuhrman Petroleum Co., Okmulgee	.....	.....	47,488.65
Finance Oil Co., Gowanda, N. Y.	13,198.63	.....	18,585.79
Fourth National Bank,* Wichita, Kans.	.....	.....	2,248.50
Fondren, W. W.,* Houston, Tex.	.....	.....	2,655.22
G			
Gypsy Oil Co., Tulsa	170,086.58	.....	258,161.59
Gypsy Oil Co., Tulsa	.....	4,486,797	264,995.63
Gypsy Oil Co., Tulsa	3,766,166.16	.....	5,858,428.35
Gypsy Oil Co.,* Tulsa	.....	.....	2,911.02
Gypsy Oil Co., (suspense), Tulsa	156,814.09	.....	253,542.33
Gypsy Oil Co., (suspense), Tulsa	.....	.....	6,751.64
Gypsy Oil Co., Tulsa	.....	271,252	23,760.54
Gardner, James, Gdn., Lina Gardner,* Marshall	.....	.....	8,034.30
Gardner, Everett, Gdn.,* Marshall	.....	.....	8,034.30
Gardner, James S.,* Marshall	.....	.....	10,107.95
Gardner, E. G.,* Asher	.....	.....	2,111.09
Gardner Petroleum Co., Tulsa	22,562.64	.....	38,474.31
Gardner, James S.,* Marshall	.....	.....	5,005.41
Gardner, James, Gdn.,* Marshall	.....	.....	5,005.41
Gardner, James, Gdn., Marshall	.....	.....	5,005.41
Gardner, Addie,* Lovell	.....	.....	15,113.38
Gardner, James H.,* Tulsa	.....	.....	2,676.02
Garland, R. F., & Co., Tulsa	9,302.02	.....	15,342.35
Graham, A. E., Okmulgee	.....	.....	15,789.50
Green, J. D.,* Maud	.....	.....	4,037.67
Glidden Oil Corp., Tulsa	6,437.41	.....	7,432.29
Goltry, V. L., trustee, Enid	.....	.....	2,069.22

(Continued on next Page)

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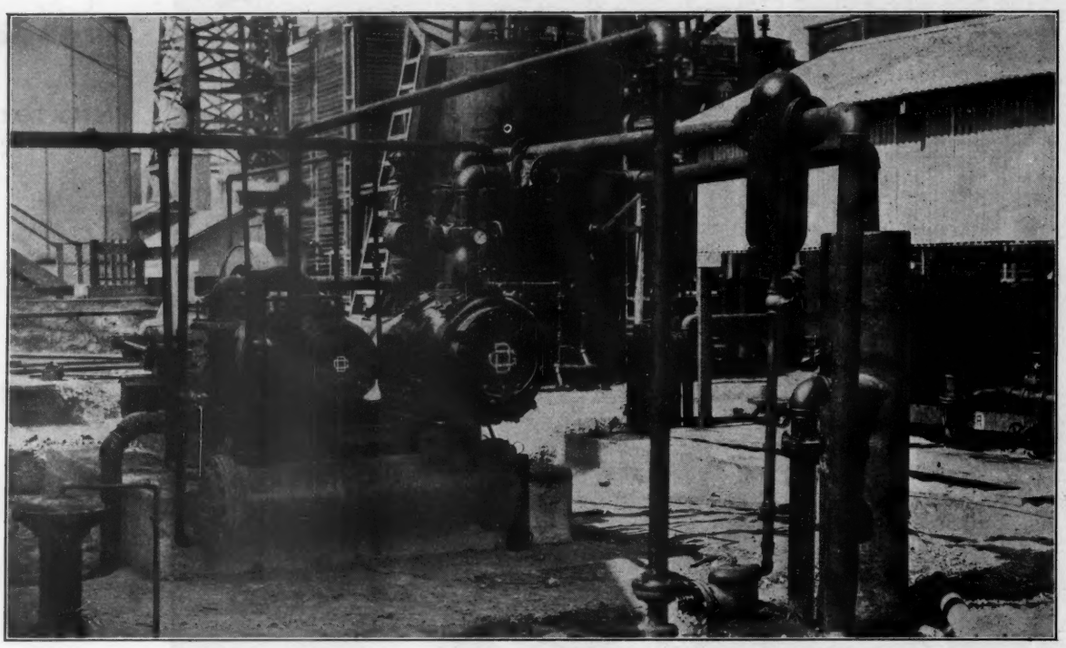

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Haywood-Williamson . . . . . Shreveport and El Dorado
Norvell-Wilder Supply Co. . . . . Beaumont, Houston and Fort Smith
The Republic Supply Co. of California . Stores in All Principal California Oil Fields
The Continental Supply Co. . Stores in All Principal Mid-Continent Oil Fields

GARDNER-DENVER

OKLAHOMA GROSS PRODUCTION THIRD QUARTER

Name and address—	No. bbls. oil	M. ft. gas	Amount
Gibson, W. A.,* Tishomingo	.....	.....	2,292.14
Grieves, John B., Terlton	8,489.41	.....	13,843.01
Guaranty Trust Co., New York City	.....	.....	36,046.31
Grimes and Gillespie, Tulsa	11,093.88	.....	17,007.62
Gilmer Oil Co., Ardmore	38,910.18	2,050	52,748.90
Grisso, W. E.,* Seminole	.....	.....	43,936.00
Grisso, W. D.,* Seminole	.....	.....	3,116.78
General Royalties Corp.,* Enid	.....	Oil	11,379.00
General Royalties Corp.,* Enid	.....	Gas	700.89
General Royalties, Inc.,* New York City	.....	.....	5,640.27
Gilcrease Oil Co., Tulsa	53,906.90	.....	65,740.00
Gilcrease Oil Co., Tulsa	5,438.44	.....	6,658.53
Glass, J. Wood,* Nowata	4,924.69	.....	6,658.53
Glass, J. Wood and H. W. Reed,* Nowata	1,518.56	.....	2,027.53
Glass and Harmon, Nowata	8,513.82	.....	12,175.60
Gibson, John J. and E. W. McNeill,* Nowata	.....	.....	2,557.01
Gully, J. C.,* Oklahoma City	.....	.....	6,777.19
Gates Oil Co., Ardmore	9,397.25	.....	11,527.34
Graafeiland, C. P. Van,* St. Louis, Mo.	.....	.....	4,440.04
Gilliam, Mrs. Annie,* Jonesboro, Ark.	.....	.....	11,510.62
Getzelman, B. C.,* Algonquin, Ill.	.....	.....	5,823.61
Geiser, H. A.,* Fillmore, N. Y.	.....	.....	7,374.11
Gaskill, M. E., Tulsa	.....	.....	16,949.64
Glassop and McInnis,* Tulsa	.....	.....	2,346.75
Glenny, Ethel,* Blackwell	.....	.....	2,622.76
Gilbraith, J. C.,* Shawnee	.....	.....	7,235.00
Green, J. C., Maud	.....	.....	7,368.39
Gladden, Charles T.,* Shawnee	.....	.....	16,540.42
Graham, W. A., estate,* Clarion, Pa.	.....	.....	2,278.33
Graham, James H., Tulsa	5,418.78	.....	8,366.07
Green, B. M.,* Sulphur	.....	.....	2,176.02
Graham, Florence M.,* Montebello, Calif.	.....	.....	9,107.24
Gillespie, F. A., & Sons, Tulsa	18,084.30	.....	21,999.34
Gorton Trust Co., Cement	8,387.20	.....	11,625.00
Gray Oil Co., Tulsa	7,552.65	.....	12,214.41
Goforth, Mary G.,* Shawnee	.....	.....	4,727.22
H			
Harmon, C. C., Nowata	7,177.44	.....	10,117.27
Hazlewood, Barton,* Mannford	.....	.....	2,978.00
Highway Oil Refining Corp., Tulsa	89,049.43	205,043	135,355.53
Hefner Oil Co.,* Oklahoma City	.....	.....	4,872.91
Hartley, J. C., agent,* Garber	.....	.....	4,963.02
Hill Drilling & Development Co., Tulsa	5,126.20	.....	7,083.88
Harmon, Gertie,* Guthrie	.....	.....	3,445.77
Harmon, C. C.,* Nowata	.....	.....	2,697.00
Hubbard, Robert A.,* Walpole, N. H.	.....	.....	3,146.82
Hopkins, A. N.,* Davenport	1,123.15	2,650	2,327.08
Hernstady, N.,* New York City	3,619.88	.....	5,222.23
Herndon, M.,* (suspense), paid by Shell Petroleum	.....	.....	7,718.13
Hudspeth, A. G.,* Lexington	.....	.....	14,040.50
Henemier, Harry,* Yonkers, N. Y.	.....	.....	2,837.81
Hassman, E. A.,* Oklahoma City	.....	.....	4,470.21
Harrington, W. J.,* Coffeyville, Kans.	3,795.25	.....	5,209.57
Hull, J. A., Co., Tulsa	44,840.48	45,788	72,130.94
Hunter, D. D.,* Shawnee	.....	.....	5,969.28
Horton, A. D., agent,* Hawarden, Iowa	5,132.00	.....	6,213.79
Horton, E. N.,* Ardmore	.....	.....	2,209.07
Hayner Royalty Corp.,* Tulsa	.....	.....	2,682.74
Hudson, Hargrove,* Tulsa	.....	.....	9,369.12
Hudson, J. H.,* Ardmore	.....	.....	26,572.26
Harrell, Ward,* Oklahoma City	.....	.....	2,934.98
Hall, J. E., Holdenville	.....	.....	49,189.11
Haun, Carl B.,* Blackwell	.....	.....	4,665.86
Howendobler, E. E.,* Tulsa	.....	.....	2,396.24
Hiddleston, Sarah Suzanna,* Oklahoma City	.....	.....	9,832.40
Hening, W. J.,* Wewoka	.....	.....	3,253.78
Henry Oil Co., Tulsa	5,228.43	.....	7,137.58
Hill, P. J.,* Shawnee	.....	.....	2,772.48
Harris, Bert, Gdn.,* Maud	.....	.....	14,667.61
Harris, V. V.,* Oklahoma City	.....	.....	28,992.66
Harris-Haun, Inc., Blackwell	.....	.....	16,032.25
Harris-Hays Co.,* Okmulgee	7,092.67	.....	10,565.89
Harris, E. L., trustee, Tulsa	.....	.....	17,165.01
Harris, E. M.,* Berryn	.....	.....	3,001.84
Harris, A. L.,* Shawnee	.....	.....	3,577.60
Hesco Oil Royalty Corp.,* New York, N. Y.	.....	.....	5,963.66
Henry, J. W., Tulsa	4,955.28	.....	9,691.79
Hambro Oil Co., St. Louis, Mo.	4,417.03	.....	5,979.75
Healdton Oil & Gas Co., Enid	26,867.51	.....	47,911.72
Healdton Oil & Gas Co.,* Enid	9,463.16	.....	15,334.21
Healdton Petroleum, Enid	.....	.....	40,567.96
Howard Petroleum Corp., Tulsa	4,124.16	.....	6,158.70
Harland Oil Co., Waico	15,896.98	58,358	22,425.58
Hay & McClure, Inc., Peoria, Ill.	12,894.46	.....	22,712.12
Hayes, J. S.,* Newkirk	.....	.....	2,212.96
Harber, W. E.,* Seminole	.....	.....	14,614.73
Harber, R. T.,* Seminole	.....	.....	4,483.81
Harber & Riddle, Inc.,* Seminole	.....	.....	5,654.98
Harber, J. N.,* Seminole	.....	.....	3,669.90
Henderson Oil Co., Marietta, Ohio	7,586.98	.....	9,480.44
Hilltop Investment Co.,* St. Louis, Mo.	.....	.....	5,039.34
Hemlock Oil Co.,* Tulsa	13,703.16	.....	21,532.41
Houston Oil Co. of Texas, Houston, Tex.	98,372.18	.....	151,137.43
Houston Oil Co. of Texas, Houston, Tex.	.....	44,586	2,176.21
Humble Oil & Refining Co.,† Houston, Tex.	225,134.45	.....	254,444.61
Humble Oil & Refining Co.,‡ Houston, Tex.	78,831.92	.....	96,290.98
Humble Oil & Refining Co.,‡ Houston, Tex.	.....	Gas	2,674.42
Hales, W. T., Oklahoma City	45,529.58	.....	57,995.13
Hales, W. T., Oklahoma City	.....	49,788	1,813.68
Hales, W. T.,* Oklahoma City	4,155.58	.....	6,611.85
Hales, W. T.,* Oklahoma City	.....	Gas	49.68
Hesslein, Max,* New York, N. Y.	.....	.....	4,451.72
Hesslein, Max,* New York, N. Y.	.....	.....	5,569.15
Homaokla Oil Co.,* Oklahoma City	7,658.79	.....	9,687.50
Homaokla Oil Co., Oklahoma City	168,990.25	.....	225,334.68
Home Gas Co. of Cushing, Cushing	23,104.70	119,711	45,425.28
Homestake Oil & Gas Co., escrow,* Tulsa	.....	.....	21,717.73
Homestake Royalty Corp.,* Tulsa	.....	.....	16,677.13
Homestake Oil & Gas Co.,* Tulsa	.....	.....	161,004.33
Hefner, R. A.,* Oklahoma City	2,634.58	.....	3,256.52
Harris, V. V.,* Oklahoma City	.....	.....	12,124.52
Hanson, Edwin,* Duncan	.....	.....	3,081.30
Howard, O. R., Tulsa	7,566.33	.....	12,856.30
Howell, Mollie E.,* Wellington, Kans.	.....	.....	2,255.13
Hammons, F. B.,* Seminole	.....	.....	3,276.59
Haskell, Frank, agent, Tulsa	9,257.50	.....	12,372.21
Hyde, C. B.,* Oklahoma City	.....	.....	2,665.90
Higgins, J. R.,* Tulsa	3,955.18	.....	6,717.52
Hewitt Mineral Corp., Ardmore	4,642.82	.....	5,242.33
Halsell & Son Oil & Gas, Vinita	3,213.34	24,384	5,483.30
Halsell, Ewing,* Vinita	1,388.23	.....	2,188.41
Hallum, W. D.,* Maud	.....	.....	2,154.71
Hatley, Mark G.,* Shawnee	.....	.....	4,778.35
Hearn, H. D.,* Marshall	.....	.....	2,274.17
Harold Petroleum Co., Blackwell	.....	.....	13,069.40
Hughes, T. J., Oil Corp., Cushing	.....	.....	5,660.90
Howendobler, E. E.,* Tulsa	.....	.....	3,042.78

†For Second Quarter, 1929.
‡This represents part of quarter; sold to Carter Oil Co.

I			
Ireland, O. M., Sapulpa	5,677.66	.....	8,372.92
Indian Territory Illuminating Oil Co., Bartlesville	1,348,712.62	.....	2,135,189.08
Indian Territory Illuminating Oil Co., Bartlesville	.....	1,374,484	113,500.31
Indian Territory Illuminating Oil Co., Bartlesville	.....	C.H.G.	3,040,594	75,087.56
Indian Territory Illuminating Oil Co.,* suspense, Bartlesville	.....	.....	23,688.57
Indian Territory Illuminating Oil Co.,* Bartlesville	79,593.73	.....	125,066.37
		C.H. Gas	630.68
Interocean Oil Co., Tulsa	43,124.79	.....	64,172.50
Indiana Oil & Gas, Tulsa	25,225.86	.....	35,587.23
Indiana Oil & Gas, Tulsa	.....	19,693	3,631.17
Indian Royalty Co.,* Okmulgee	59,480.16	.....	93,170.30
Ice, A. B., and L. F., Tulsa	.....	.....	5,962.91
Imperial Royalties Co.,* Kansas City, Mo.	Oil	.....	247,234.67
Imperial Royalties Co., Kansas City, Mo.	.....	Gas	4,365.53
Imo Oil & Gas Co., Covington	.....	.....	12,523.93
Income Oil & Royalty Co.,* Denver, Colo.	.....	.....	3,712.31
Iron Mountain Oil Co., Tulsa	12,045.35	20,306	17,833.72
Iron Mountain Oil Co.,* Tulsa	9,458.35	1,530	14,739.36
Independen. Oil & Gas Co., Tulsa	1,443,860.72	.....	2,229,021.86
Independent Oil & Gas Co., Tulsa	.....	Gas	138,516.82
Independent Oil & Gas Co.,* Tulsa	.....	.....	19,632.01
Independent Oil & Gas Co., suspense, Tulsa	.....	.....	6,713.60
Ingram, A. J.,* Shawnee	4,095.87	.....	6,787.21
Ingram Royalty Co.,* Shawnee	.....	.....	12,963.28
Ingram, J. A.,* Shawnee	.....	.....	23,400.38
Ingram, Leonard D.,* Cleveland, Ohio	.....	.....	2,138.07
Ingram, H. L.,* Shawnee	.....	.....	8,188.58
Investors Royalty Co.,* Tulsa	92,546.83	.....	143,644.18
Investors Royalty Co., Inc., Tulsa	.....	Gas	4,905.96
J			
Jennings, E. J., Bros. Co., Pittsburgh, Pa.	3,758.36	595	5,584.71
Jennings, Randolph P.,* Beverly Hills, Calif.	.....	.....	41,523.53
Jennings, R. G., Pittsburgh, Pa.	6,074.20	.....	10,251.43
Junction Oil & Gas, Newkirk	4,406.63	.....	6,599.17
Josey Oil Co, Tulsa	97,499.71	.....	170,444.88
Josey Oil Co., Tulsa	.....	119,020	7,012.70
Jarvis-Zollinger and Andrews, trustees, Shawnee	.....	.....	17,861.53
Jones, Robert L.,* Bristow	2,320.38	4,147	4,498.30
Jones, B. B.,* Washington, D. C.	4,087.42	.....	6,645.73
Jones, J. Edward,* New York, N. Y.	.....	.....	6,323.85
Jones, Calvin,* Oklahoma City	.....	.....	7,421.13
Jones, Lena,* Seminole	.....	.....	2,378.30
Jones, R. C., & Co., Inc., Cushing	.....	.....	14,000.96
Joines, U. S.,* Ardmore	.....	.....	2,195.81
Jameson, John B.,* Concord, N. H.	.....	.....	44,636.00
Johnston, Ralph W., by Mrs. Franklin Love, trustee, Denison, Tex.	2,108.97	.....	2,508.27
Johnston, Willard,* Shawnee	.....	.....	4,348.42
Johnston, Willard,* Shawnee	.....	.....	4,132.73
Johnson, B. F., and Mary Eva,* Fayetteville, Ark.	.....	.....	8,276.94
Johnson, C. O., and George C. Pendleton,* Durant	.....	.....	6,943.13
Johnson, Roy M., Ardmore	.....	.....	10,766.56
Johnson, Roy M.,* Ardmore	.....	.....	5,629.69
Johnson Oil Refining Co., Chicago, Ill.	11,178.40	.....	15,888.14
Johnson, J. T.,* Sulphur	.....	.....	3,145.29
Jackson, L. B.,* Sapulpa	.....	.....	15,879.07
Jackson, L. B.,* Sapulpa	1,835.12	.....	2,821.65
Jackson, Wise and Bovaird, Sapulpa	4,530.24	.....	5,175.38
Jackson, Wise and Snedden, Sapulpa	.....	.....	1,210.31
Jackson, Wise and Markham, Sapulpa	.....	.....	2,634.05
Jackson and Wise, Sapulpa	3,445.61	.....	3,900.71
Jackson & Morrison, Sapulpa	.....	.....	1,660.24
Jacobs, Leo, St. Louis, Mo.	3,573.05	.....	4,998.08
Jarvis, Zollinger and Andrews,* trustee, Shawnee	.....	.....	17,861.53
Jarvis & Holm, Inc., Tulsa	7,663.94	.....	9,237.13
Johnson, C. J.,* Oklahoma City	.....	.....	3,949.02
K			
Kewanee Oil & Gas, Titusville, Pa.	235,393.52	6,055,986	412,516.15
Keener Oil & Gas, Tulsa	40,158.21	.....	52,819.18
Keener Oil & Gas, Tulsa	.....	4,981	245.61
Kolk, S. I., Duncan	.....	.....	2,360.00
Kanner, Mack, New York, N. Y.	.....	.....	9,729.44
Kennedy, Emma B., trustee,* Okemah	.....	.....	5,260.19
Kennedy, S. P.,* Bradford, Pa.	1,317.80	.....	2,021.70
Knox, Charles E., Enid	3,675.36	.....	7,102.33
Klein, Nettie,* New York, N. Y.	.....	.....	14,124.18
Kershaw, L. R.,* Muskogee	.....	.....	2,926.12
Kiester-Manning, Inc., Tulsa	14,569.26	15,417	22,936.94
King, Helen Walker,* Orange, Calif.	.....	.....	15,861.45
King, Helen Walker, guardian,* Orange, Calif.	.....	.....	5,629.39
King, J. T., Okmulgee	3,855.31	.....	6,359.19
King Royalty Co., Wichita Falls, Tex.	5,671.21	.....	8,629.11
Kingwood Oil Co., Okmulgee	56,920.56	12,702	94,066.14
Kelley, Lee,* Norman	.....	.....	6,409.65
Kelly, Albert,* Bristow	.....	.....	2,505.27
Knotts, Sarah K.,* Stillwater	.....	.....	8,106.40
Keck, I., and L., Nacona, Tex.	.....	.....	3,463.52
Kirk Oil Co., Ardmore	.....	.....	6,241.38
Knappenberger, D. L., Tulsa	3,749.61	.....	5,946.05
Kirkland, John L., & Son, Tulsa	7,278.84	.....	9,047.95
Kreola Oil Co., Ardmore	10,158.89	.....	7,563.61
Kreola, Colcord and Commerce, Ardmore	9,741.93	.....	12,517.34
Kisner, R. R.,* Enid	.....	.....	3,748.56
Kisner, Minnie L.,* Enid	.....	.....	3,748.56
Kimble, C. C., and Sallie,* Beggs	.....	.....	5,668.89
Kay County Gas Co., Ponca City	.....	838,032	84,803.60
Kay and Kiowa Oil Co., Tulsa	5,902.33	.....	10,019.81
Kay Oil Co., Blackwell	33,921.19	.....	57,691.23
Knappenberger, Frank,* Phoenix, Ariz.	.....	.....	5,294.62
L			
Lima Oil & Gas, Bartlesville	2,298.06	.....	2,880.88
Lima Oil & Gas, Bartlesville	.....	227,280	13,442.44
Little Nick Oil Co., Chickasha	.....	.....	11,687.72
Link Oil Co., Tulsa	17,058.28	12,561	26,198.33
Liberty Royalties Corp.,* Tulsa	11,073.24	.....	17,732.77
Lafayette, Ben, Oklahoma City	.....	.....	30,476.06
Large Oil Co., Bartlesville	3,074.12	.....	5,418.46
Lawson Petroleum Co.,* Tulsa	1,816.58	.....	2,540.99
Lenox Oil Co., Okmulgee	.....	.....	17,043.17
Lone Star Gas Co., Dallas, Tex.	5,909.76	.....	10,319.45
Louisiana Oil Refining Corp., Shreveport, La.	104,641.77	243,537	133,912.42
LeFlore County Gas & Electric, Poteau	.....	422,195	12,665.85
Lynch, C. B.,* Tulsa	.....	.....	2,174.34
Longmire, W. M.,* Oklahoma City	.....	.....	5,428.89
Lebow, C. H., Tulsa	.....	.....	12,325.39
Lebow, C. H.,* Tulsa	1,975.40	.....	2,956.90
Lack, B. D., Tulsa	.....	.....	5,597.38
Lack, Matyse B.,* Oklahoma City	.....	.....	6,675.29
Lack, B. D., Co.,* Oklahoma City	.....	.....	6,570.69
Lytal, Henry,* Oklahoma City	.....	.....	2,023.57
Lewis, Wade,* Harlan, Iowa	2,598.00	.....	4,572.62
LaForce and Ferguson,* Limon, Colo.	.....	.....	5,163.86
Loonee, Joseph C.,* Wewoka	.....	.....	2,288.24
Lilami Oil Corp., Oklahoma City	11,392.79	.....	9,438.58
Lawton, Henry H.,* Olean, N. Y.	.....	.....	2,159.76
Lahman, John L., Altus	.....	.....	4,060.50
Lambert, Flora M.,* Holdenville	.....	.....	4,703.95
Lillard, Mrs. J. C.,* Wewoka	.....	.....	9,663.21
Laselle, T. E., Ada	4,551.01	.....	6,717.68
Longworth, Arthur W., Scarsdale, N. Y.	.....	.....	2,269.47
Ludey, Patty Spence, by Gypsy Oil Co.	4,279.97	.....	5,777.97
Livermore, W. H.,* Chickasha	.....	.....	2,020.08
London, A. M., Independence, Kans.	6,099.22	.....	8,828.42
Laughlin, W. T., and L. G.,* Oklahoma City	.....	.....	4,573.00

(Continued on Page 161)

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Vogt Boilers are today serving practically every industry requiring steam for power, heating, or process work. They are popular not only because there is a type and size for any condition but because they deliver uninterrupted service continually at the lowest operating expense.

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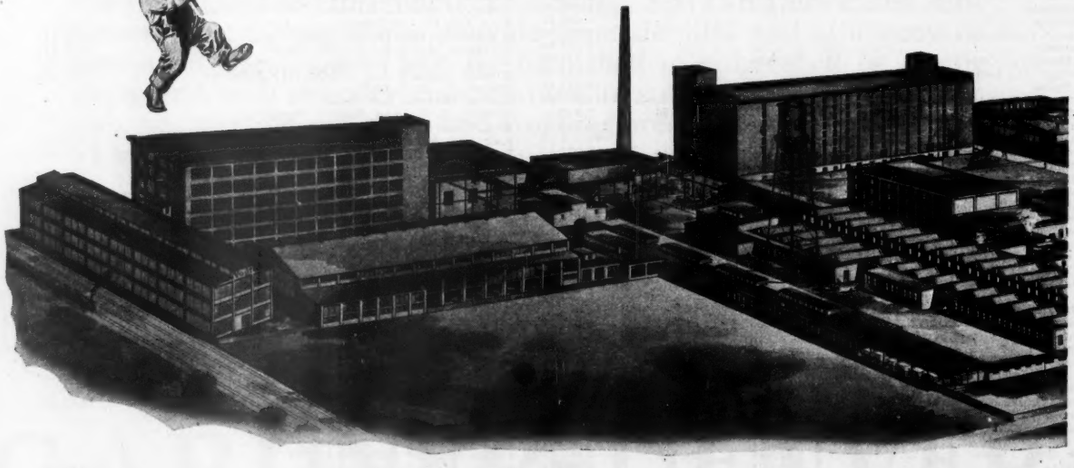

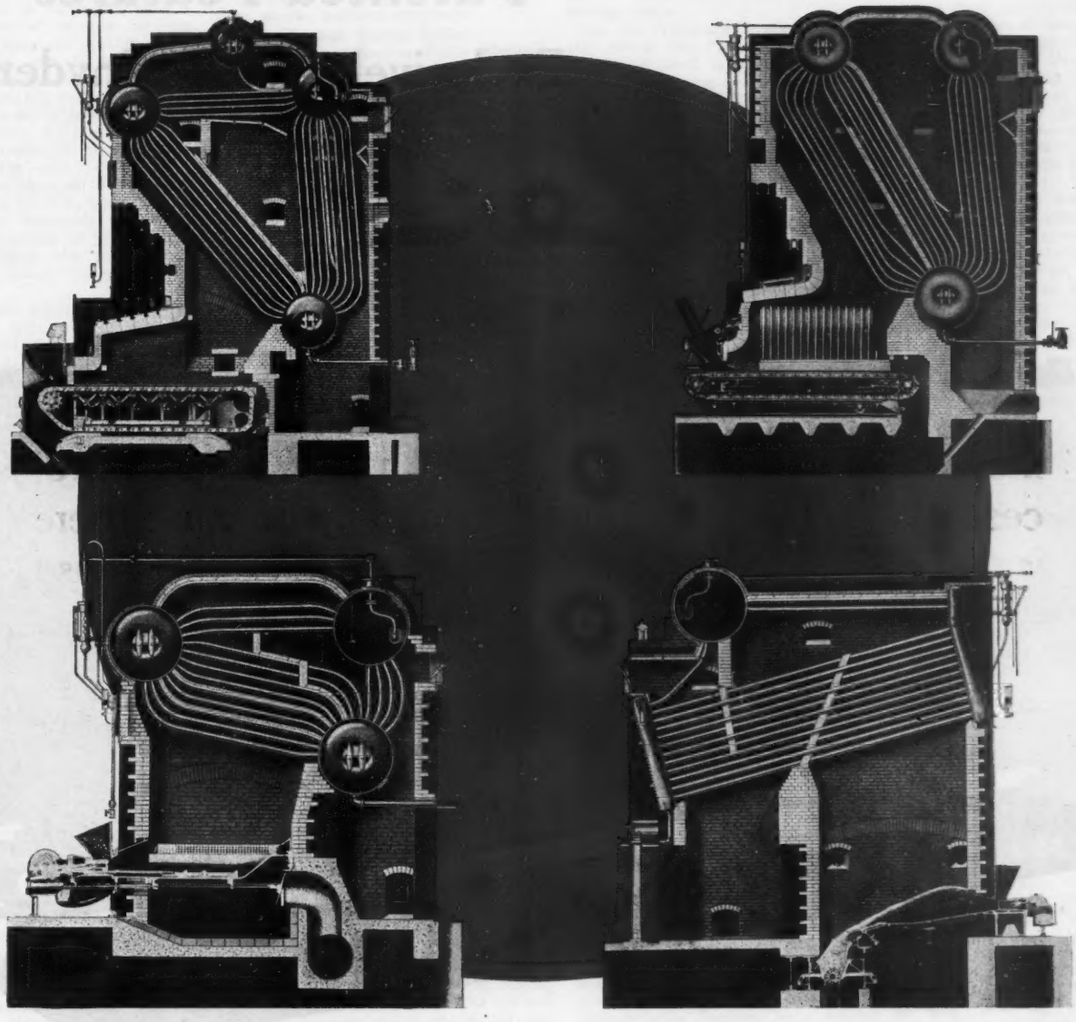

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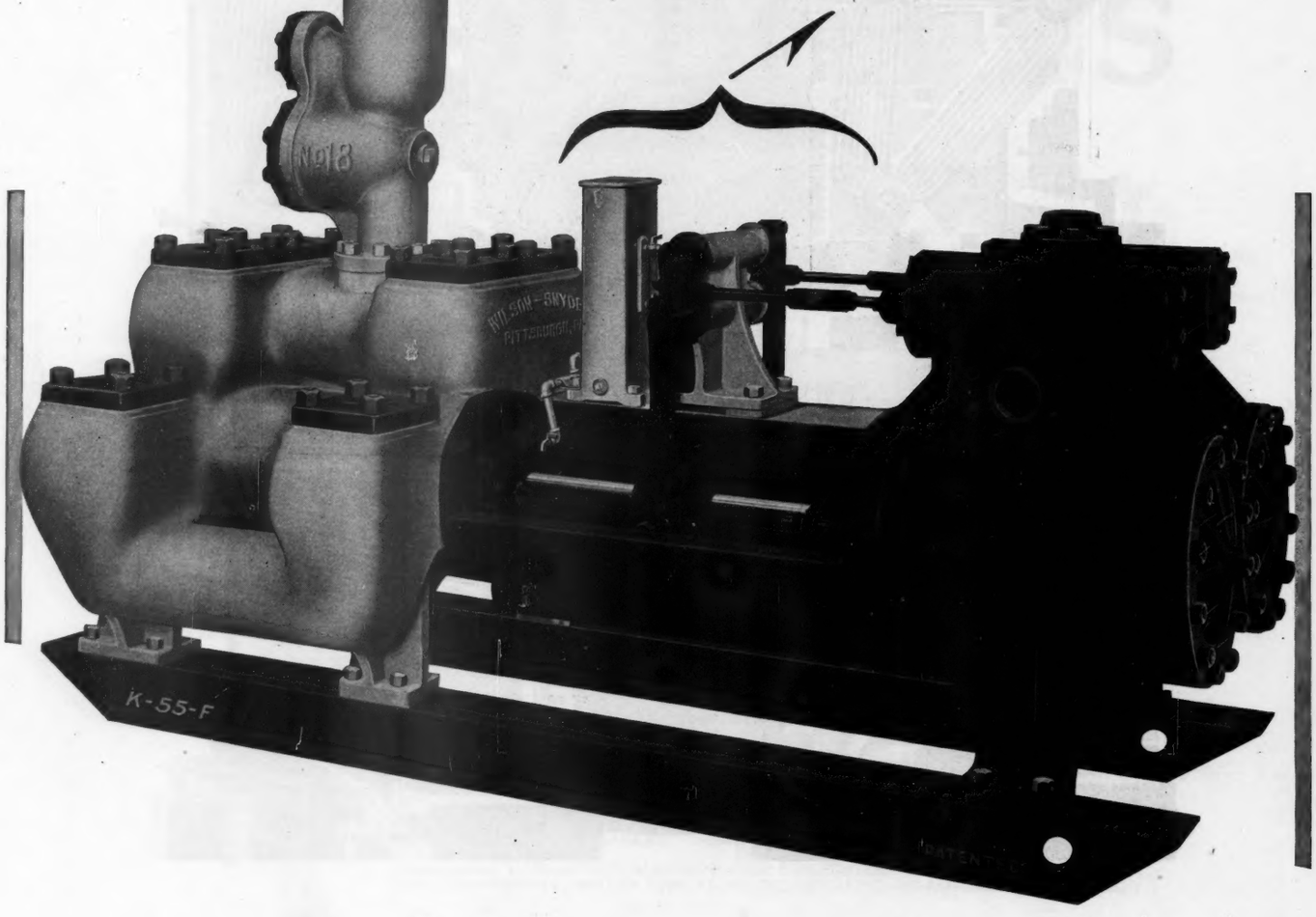

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TECHNICAL QUESTIONS AND THEIR ANSWERS

(Continued from Page 98)

removing the free fatty acids from the saponifiable oils the tension rises, and by adding free fatty acids to the mineral oil the tension can be lowered. The permanency of films is dependent upon a diminished interfacial tension between the oil and the metal in contact therewith. If such a film is broken the possibility of its uniting again to form an unbroken layer depends entirely upon the interfacial tension being low. Any substance which lowers the interfacial tension causes the liquid to spread over a larger area of the solid. Hence, if a substance is added to an oil which brings about a lowering of this tension, such addition will act favorably as far as lubrication is concerned by preventing a rupture of the liquid film and preventing in turn the metals coming into direct contact.

Results are given which show that one per cent of free fatty acids of rape oil added to a mineral oil are as effective in reducing the value of the frictional coeffective as is the addition to the mineral oil of 60 per cent of neutral rape. The authors use the expression "germ process" to indicate the method for the preparation of a lubricating oil by the addition of small quantities of the proper fatty acids to a mineral oil. "As the germ is the first principle of organic life, by analogy we call a suitable acid when dissolved in mineral oil the 'germ,' which gives to mineral oil its life and activity as a more perfect 'instrument of lubrication.'

"We do not claim that a 'germ process' oil is better for all conditions of lubrication, but for many purposes where lubrication depends upon the oil alone and not upon any mechanical means, such as pressure, to maintain a continuous film."

EASTERN FIELDS

(Continued from Page 88)

jun sand at No. 1,116 on the S. A. Hays farm. In the same district the Sycamore Fuel Co. has a 10-bbl. pumper in the Big Injun at a second test on the G. J. Bennett farm. In the same district C. B. Lewis & Co. have an 8-bbl. pumper on the Baptist Church lot. In Lee district, Calhoun County, F. F. McIntosh & Co.'s test on the S. A. Hays farm is a gasser in the Big Injun sand. In the same district Everet Starcher & Co. have completed a test on the D. W. Price farm. It is dry and abandoned. In the same district the Hope Natural Gas Co.'s No. 7,420 on the K. M. Hunt farm is a gasser in the Big Injun sand.

SOUTHWEST PENNSYLVANIA

In Moon Township, Allegany County, Bell & Gross have completed a test on the Mrs. K. E. Dally farm. It is showing for 3 or 4 bbls. in the 100-foot sand. In Perry Township, Greene County, the Carnegie Natural Gas Co. has a gasser in the Big Injun sand on the George Bowers farm.

In Whitely Township the Philadelphia Gas Co. has a gasser in the 50-foot sand on the Roberts heirs' farm. In Aleppo Township the McCall Drilling Co. has completed No. 3 on the John Chambers farm. It is a gasser in the Fourth sand.

In Center Township, Greene County, the Manufacturers Light & Heat Co. has a Fifth sand gasser at No. 3,375 on the Thomas Wood farm. One mile east of Dunn Station, Morris Township, Washington County, J. B. Nuss & Co. have a gasser good for 500,000 feet in the Big Injun sand on the John Lewis heirs' farm.

CANADIAN FIELDS

(Continued from Page 62)

No. 4 is digging cellar in NE LSD 2, Section 1-18-2w5.

Askalta Oils' No. 1, LSD 16, Section 5-19-2w5, is working on derrick. Merland Oils' No. 2, Section 27-18-2w5, is working on cellar and hauling derrick timbers.

Rand Petroleums' No. 1, LSD 5, Section 34-18-2w5, is to be drilled jointly with Vanberta Oils, Ltd., which is moving drilling outfit and equipment from its No. 1 test on the new Black Diamond structure in the north end of the field. Vanberta's No. 1 was shut down when Outwest Petroleums' No. 1 struck a fault, but the Vanberta derrick will be left pending the result of other operations on the northern structure.

Central Turner Valley

In the central Turner Valley McLeod Oil Co.'s No. 1, LSD 16, Section 1-20-3w5, is fishing lost bit. A 24-hour production test with bit in the hole showed 30 bbls. recovery from the lime but if production with the hole clear does not reach 50 bbls. it will likely be deepened.

British Dominion Oil Development Corp.'s No. 2, LSD 6, Section 12-20-3w5, is drilling about 20 feet in the lime at 5,085 feet and recovering some light crude from between the casing. Shareholders of the company held their annual meeting recently at Calgary, when operations were reviewed as follows:

"In the upper formation we encountered a little faulting, resulting in about 900 feet greater depth to the lime than anticipated. After drilling through this fault the regular series of formations were passed through, encountering two producing sands: first, the McDougall-Segur, and then the Dalhousie. From bailing tests made from the McDougall area we came to the conclusion the well might produce 30 bbls. a day. Our contract with the McDougall-Segur Exploration Co. did not permit our ceasing to drill unless production reached 75 bbls. per day; we therefore shut off the oil with our 10-inch casing and drilled on.

"The producing area in the Dalhousie sands was reached at 4,822 feet and this area proved more productive than the McDougall. During drilling operations the oil rose over 4,000 feet in the well. No test other than swabbing was made, as we were within a short distance of the limestone. Whenever the oil became troublesome we swabbed, and the lime was reached at a depth of 5,064 feet. Altogether some 600 bbls. of oil were saved by this method. Of course considerable oil was lost when bailing out the mud from the bottom of the hole but this was unavoidable. Some gas was struck at the top of the lime which we hope to utilize in producing the Dalhousie oil. The lime was penetrated about 14 feet and the casing then run and cemented. While the cementing results in the shutting off of the Dalhousie oil and prevents it being taken through the 6-inch casing, this production is not lost. The oil will come up between the 6 and 8-inch casings and will be taken off through a bradenhead whenever the gas beneath the oil gathers sufficient pressure."

As soon as No. 2 is finished, No. 3 will be located in the same LSD. The company has secured additional arceage in the South Turner Valley and Waite Valley areas. No. 1 test in Section 7-20-2w5 was abandoned last year at 6,600 feet, after establishing a Canadian deep drilling record. No. 2 has cost around $101,000 to drill. The following officers were re-elected: president and managing director, J. H. Goodwin; vice president, M. C. Costello; secretary treasurer, Hardie Turnbull; directors, A. H. Goodall, William Matthew, Dr. R. M. Cook, T. Langley Webb.

North Turner Valley

In the north Turner Valley area, Vulcan Oils' No. 1, LSD 11, Section 13-20-3w5, shows increased wet gas production from the lime, following sidetracking of lost tools.

On the New Black Diamond structure, drilling is at a standstill except for Weymarn Petroleums' No. 1, LSD 1, Section 3-20-3w5, which is drilling at 2,950 feet.

In the Moose Mountain district, Elbow Oils' No. 1, LSD 11, Section 35-22-5w5, is drilling and carrying 12½-inch casing after getting a strong show of crude oil around 2,825 feet. Location is near Bragg Creek, west of Calgary.

On the Moose Dome, Moose Oils' No. 1, LSD 16, Section 29-22-6w5, is cementing after striking a strong gas flow at 960 feet. A previous flow, estimated 500,000 feet a day, was struck at 500 feet depth. The gas will be taken between 10-inch and 12½-inch casing and used for fuel.

On the Morley Reserve, Wabash Oils' No. 1 has encountered a strong gas flow 200 feet in the Devonian limestone at 2,972 feet depth. Tools are being removed for a measurement test before drilling deeper.

On the Highwood structure Hudson's Bay Oil & Gas Co.'s No. 1 Highwood, Section 8-18-3w5, is drilling at 1,100 feet after encountering additional gas.

In the Wildcat Hills area, Frontier Oil Syndicate's No. 1 is reported down 1,575 feet. The location is 35 miles northwest of Calgary and 6 miles northwest of Cochrane, and the syndicate is a subsidiary of the Canadian Exploration Co. of Denver, which this year has carried on an extensive geological survey in Alberta.

An important new wildcat test is being undertaken on the Calling Valley structure where Anglo-Indian Oils Corp. of Calgary some time ago made a location in LSD 4, Section 31-21-3w5. The structure was reported on by E. H. Cunningham Craig in the course of his recent visit to Alberta. The structure is rather to the east of the foothills and 6 miles north of the most productive area of the Turner Valley. Derrick has been erected and the test may be spudded in this fall. According to Cunningham Craig's report, drilling will not require to be very deep as the series of strata thins out to the eastward from the foothills. A test 3,500 feet is expected to enter the Kootenays and the underlying limestone should be found not much deeper than 4,000 feet, and there are possibilities of gas and oil in smaller quantities within 2,000 feet. The outlying folds of the foothills, where the strata are less steeply inclined, are regarded by some geologists as the possible sources from which the light oils and crude naphthas of the Turner Valley are filtered.

In the Pincher Creek area, Weymarn Petroleums' Mount Royal No. 1, LSD 4, Section 7-6-1w5, is reported abandoned owing to drilling difficulties at around 1,080 feet. The test encountered a gas flow estimated around 500,000 feet a day. Weymarn's No. 2 has cellar dug and is hauling derrick timbers and machinery.

On the Ghost River structure, Atlantic Keystone Petroleum Co.'s No. 1, LSD 1, Section 19-27-6w5, is reported drilling at 2,058 feet, being now the deepest test on this structure. A second test may be started this season on the Highwood structure and the company is reported negotiating for control of Teapot Dome Oils, Ltd., which in addition to Wyoming acreage holds territory on a number of structures in Alberta.

A Los Angeles syndicate represented by A. E. McCroskey has taken over 9,000 acres on the Watson structure, 35 miles south of Turner Valley, from Dr. F. E. Sandercook, C. E. Meadows, the Marjon Oil Co. and the E. M. Craig Syndicate. It is reported that $30,000 has been already spent in preliminary investigations of the structure which was examined by Dr. L. Z. Johnson and Dr. Laurence Putnam. The McCroskey syndicate undertook a tentative program of 50 tests, of which three are to be started by April 30, 1930, and five by the end of next year. Acreage taken over is in Township 12-2w5. To the north, South Highwood Syndicate holds 7,200 acres on the same structure.

In the Red Coulee Field, west of Coutts, Vanalta Oils' No. 2, Section 4-1-16w4, is reported spudding in. Gol-Gar Petroleum Co.'s No. 1, LSD 1, Section 11-1-17w4, is rigged up.

On the Montana side, Mid-Continent Oil Co.'s No. 1 Farbo, NE Section 2-37-4w, has spudded in. Hannah-Porter Co. is reported rigged up ready to spud in an offset to Mid-Continent's No. 1 on the southeast and Texas-Pacific Oil Co. is preparing to test adjacent acreage.

Further south, the Monalta Oil Co. has contracted for two additional tests, one of which will probably spud in this month, on a location midway between Monalta's No. 2 and Vanalta's No. 1 producer, and about a half-mile south of the latter.

On the Canadian side, the new Red Coulee Field has drawn some companies that had already made tentative locations in the Turner Valley Field. Bush Petroleum Corp.'s No. 1 has been spotted in SW Section 9-2-17w4, to spud in by December 1. This acreage is northwest of Vanalta's No. 1. Drilling will be on contract with cable tools, G. G. Fleming being field superintendent. O. B. Bush, mine owner, of Vancouver, B. C., is president. S. E. Slipper Syndicate of Calgary has a tentative location in Section 24-1-17w4. A British syndicate is negotiating for a block of acreage in Township 1-17w4 and is planning an extensive drilling program. Cosmos Petroleum Co., headed by Montana operators, is reported rigging up on the Montana side south of Vanalta's No. 1. Derrick Oils, Ltd., of Winnipeg, will drill a test on acreage adjacent to Vanalta. Officers are: president, W. B. Lawson; vice president, W. G. Chace; secretary, J. F. Davidson; directors, John Gibb, R. D. Smith, Michael Hanlon and John Affleck. The company has taken over 2,200 acres on various Alberta structures formerly held by Derrick Natural Gas & Oil Co.

Admiral Oils, Ltd., of Toronto, has located a test in Section 7-1-16w4. Pacalta Oils, Ltd., has location in Section 24-1-16w4. Barker Syndicate of Vancouver has acreage and will drill in Township 1-16w4. Dalco Oil & Gas Co., closely connected with Calmont Oils, Ltd., of Calgary, will drill a series of three tests on acreage, already core drilled by the Canadian Western Natural Gas Co. and lying between the Red Coulee and Milk River structures.

KANSAS FIELDS

(Continued from Page 52)

12-23-14, has been abandoned at 1,644 feet.

Cowley County

Lewis Production Co. and Gypsy Oil Co.'s No. 1 Fitzgerald, NW cor. NE SW Section 20-31-6, is rigging up. Mission Oil Co. made location for No. 1 Martin, C NW NW Section 21-31-6. Hull and others' No. 16 Wallace, NW cor. NE SE Section 24-32-4, is a rig under construction. Crow and others moved the rig in for No. 3 Powers, SW cor. NW Section 9-32-5. T. B. Slick and Pryor and Lockhart's No. 1 Ratts, NW cor. NE SE Section 25-30-5, is dry and abandoned at 2,974 feet. Roth & Laurot's No. 1 McEwin, SW cor. SE Section 7-32-5, has been abandoned at 3,564 feet. Foster & Deal's No. 1 Wright SE cor. NW Section 27-33-3, is a dry hole at 3,803 feet. Shawver and others' No. 6 Baird, C NE NE Section 17-34-3, is dry and abandoned at 1,963 feet. Trees Oil Co.'s No. 1 Brubaker, CEL SE NW Section 12-34-6, is dry and abandoned at 1,161 feet.

Dickinson County

Millmack Oil Co.'s No. 1 Biehler, NW cor. SW NE Section 28-16-4, is dry and abandoned at 3,001 feet.

Elk County

Pure Oil Co.'s No. 7 Chaffin, NW cor. SW SE Section 24-31-10, made 15 bbls. in sand 1,391-1,401 feet.

Greenwood County

Balliere and others made location for No. 1 Barnard, SW cor. NE Section 32-22-10. O'Neil and others staked location for No. 1 Brinn "A", NW cor. NE NW Section 34-22-11. The Prairie Oil & Gas Co. made location for No. 1 Newhouse, NW cor. NE NE Section 1-24-11. T. K. Simmons and others' No. 1 Steel, SE cor. NE Section 32-22-12, is a dry hole at 1,940 feet. The Prairie Oil & Gas Co.'s No. 1 Hunt, NE cor. SW Section 22-24-12, has been completed as a dry hole at 1,675 feet. Roth & Faurot's No. 1 Martindale, SE cor. NE Section 30-23-10, made 20 bbls. in sand 2,358-63 feet. Empire Oil & Refining Co.'s No. 3 Laird, NE cor. SE SW Section 21-23-11, has been abandoned at 1,995 feet. Independent Oil & Gas Co.'s No. 1 Beal, NE cor. NW Section 28-23-11, has been completed for 10 bbls. in sand 1,918-88 feet. Houston Oklahoma Oil Co.'s No. 6 Hout, CEL SW SW Section 11-24-12, has been completed for 70 bbls. in sand 1,720-31

feet. Waltom Oil Co.'s No. 1 Barnes, SW cor. NW NW Section 7-24-13, made 25 bbls. in sand 1,638-54 feet. Mendenhall and others' No. 2 Hollister, CNL NE SW Section 9-25-13, is dry and abandoned at 1,760 feet. Bisagno and others' No. 3 Ralston, CSL SW NE Section 9-25-13, has been abandoned at 1,650 feet. Elk River Oil Co.'s No. 1 Peterson, NW cor. Section 20-27-11, has been abandoned at 2,014 feet.

Lyon County

Gordon & Staats' No. 1 Bache, NE cor. SE NW Section 16-17-10, is drilling at 150 feet.

Sedgwick County

The Prairie Oil & Gas Co. made location for No. 2 H. B. Smyser, SW cor. SE SW Section 36-25-1w, Valley Center Field. Location was also made for No. 3 H. B. Smyser, SE cor. SW Section 36-25-1w. No. 5 Ida Smyser, SW cor. SE Section 36-25-1w, is a location. Dixie Oil Co. and Amerada Petroleum Corp.'s No. 1 Foulston, SW cor. NW Section 11-26-2, is a rig going up. C. B. Davis made location for No. 1 Van Arsdale, SE cor. NW SE Section 14-27-1w.

SOUTHWEST TEXAS

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Grant, 90 feet north line, 150 feet west line, spudded in.

Duval County—Schoolfield-O'Byrne

S & O Oil Co.'s No. 7 Hahl, Block 23, Survey 250, 450 feet south line, 150 feet west line, total depth 2,356 feet, set 6⅝-inch casing at 2,345 feet, sand at 2,347-56 feet, 25 bbls.; No. 9 Hahl, Block 22, Survey 250, 450 feet north line, 150 feet west line, location.

Jim Hogg County—Randado Pool

Randado Oil Corp.'s No. 35 Palacious, Block 2, Survey 291, standing at 100 feet.

Magnolia Petroleum Co.'s No. 1 N. Hinnant, Block 1, Survey 20, 600 feet north and west lines, drilling at 2,650 feet; No. 1 Weil, Block 2, Survey 5, 660 feet north line, 349 feet east line, location.

Webb County—Schott Field

Livingston & Payne's No. 1 Guerra-Ochoa Survey 58, 1,371 feet east line, 470 feet south line, testing at 1,620 feet.

Webb County—Mid-Ojules Pool

Crown Petroleum Co.'s No. 2 E. Garcia, Block 2, Survey 463, 1,300 feet east line, 3,350 feet south line, abandoned dry at 2,630 feet.

Webb County—Albercas Pool

Rycade Oil Corp.'s No. 10 Yeager-Strohman, Share 5, Las Animas Grant, 150 feet south line, 200 feet east line of Rycade's 631.8 acres, total depth 2,149 feet, 75 bbls.

Webb County—Carolina-Texas Pool

W. R. Shankle's No. 2 Webster Survey 684, 1,170 feet west line, 150 feet south line, rigging up.

Webb County—Magnolia Cole

Cole Petroleum Co.'s No. 67 Benavides, Block 4, Survey 412, 313 feet east line, 160 feet north line, total depth 150 feet, resumed drilling.

Webb County—Magnolia-Cole

Houston Oil Co.'s No. 1-H R. Benavides Survey 701 B.S.&F., 546 feet north line, 150 feet west line, location; No. 20-D R. Benavides, Survey 753, 600 feet north off No. 19, total depth 2,351 feet, set 6⅝-inch casing at 2,345 feet, sand at 2,347-51 feet, 75 bbls.

Magnolia Petroleum Co.'s No. 1 J. G. Valdez, Block 15, Survey 754, 150 feet south and west lines, derrick; No. 2 J. G. Valdez, Block 2, Survey 754, 330 feet to north line of Block, 2,660 feet to east line of Block 2, total depth 2,322 feet, 20,000,000 feet gas, 550 pounds rock pressure, sand at 2,309-22 feet; No. 1 D. Benavides, Block 14, Survey 694, 660 feet to east and south lines, derrick.

Webb County—Cole Gas Field

Magnolia Petroleum Co.'s No. 1 S. Perez, Survey 460, J. Poitevent, 1,980 feet north line, 660 feet west line, total depth 2,489 feet, sand; tested gas, set 8½-inch casing, waiting on cement; No. 2 King-Harper, Block 2, Survey 323, 660 feet north and east lines, location.

Houston Oil Co.'s No. H-1 R. Benavides, Survey 701, 666.2 feet south line, 666.3 feet east line, total depth 2,282-83 feet, set 6⅝-inch casing at 2,282 feet, sand at 2,282-83 feet, waiting on cement; No. 20-D Benavides, Block 5, Survey 753, 566 feet north line, 660 feet east line, total depth 2,351 feet, set 6⅝-inch casing at 2,346 feet, sand at 2,346-51 feet.

John J. O'Hern's No. 2 Valdez, Block 6, NE SW Survey 754, 663 feet north line, 667 feet east line, total depth 2,324-51 feet, sand, tested gas and oil, set 6⅝-inch casing at 2,330 feet, waiting on cement.

O. W. Killam's No. 13 Bruni Survey 3 Adams Subdivision Bruni lands, Mariano Arispe Grant, 491 feet southwest line, 208 feet southeast line, Block 1, total depth 3,152 feet, depth corrected, sand at 2,367 feet, tested salt water, show of gas, abandoned; No. 14 Bruni Survey 5 Adams Subdivision Bruni lands, Mariano Arispe Grant, 150 feet northwest lines, 150 feet southwest lines, Block 11, drilling in sand at 2,312 feet.

Zapata County—Charco Redondo

Loyal Oil Co.'s No. 17 J. G. Martinez in the C. Redondo Survey, 600 feet northeast of No. 10, location; No. 18 J. G. Martinez in the C. Redondo Survey, 300 feet northwest of No. 17, location; No. 19 J. G. Martinez in the C. Redondo Survey, 300 feet north of No. 15, location.

Zapata County—Jennings Pool

Blair & Acklin's No. 2 Trevino, Block 1, Survey 66, 150 feet west line, 200 feet north line, drilling at 900 feet.

Blankenship and others' No. 1 Trevino, Survey 413, 2,480 feet south and east lines, location.

R. F. Blankenship's No. 1 Garza, Block 13, Survey 413, 160 feet north and east lines, standing at 1,510 feet.

O. W. Killam's No. 1 Flores Survey 240, 850 feet southeast lines, 560 feet northeast lines, drilling at 1,260 feet; No. 2 Flores Survey 250 and south of Survey 110, 1,565 feet east line, 150 feet north line, abandoned dry at 2,500 feet.

Killam-Duggan's No. 9 Cuellar Survey No. 277, 3,040 feet east line, 310 feet south line, total depth 1,591 feet, set 6⅝-inch casing at 1,590 feet, sand at 1,590-91 feet, flowed 590 bbls. October 28, later increased to 960 bbls., now flowing 800 bbls.; No. 10 Cuellar Survey 277, 2,095 feet west line, 1,890 feet south line, coring at 1,576 feet; No. 11 Cuellar, 645 feet southwest line, 1,350 feet northwest line of 866-acre tract which is east half of 1,722-acre Cuellar tract Cerrito Blanco Grant, drilling at 300 feet.

O. W. Killam's No. 17 Cuellar, 600 feet north line, 940 feet east line, 160-acre Cuellar tract out of 1,772-acre Cerrito Blanco Grant, derrick.

South Texas Production Co.'s No. 1 Roy Jennings Survey, Mira Flores Grant, 18,055 feet southwest lines, 11,040 feet southeast lines, also 4,236 feet south 63° west of No. 4, drilling at 3,280 feet; No. 2 Roy Jennings, Cerrito Blanco Grant, 13,000 feet northwest line, 9,800 feet southwest line, drilling in hard lime at 1,723 feet; No. 6 Joe Jennings Cerrito Blanco Grant, 2,640 feet southeast line, 660 feet northeast line, total depth 1,748 feet, 20,000,000 geet gas, 650 pounds rock pressure.

MORE MERGERS ARE UNDER CONSIDERATION

(Continued from Page 41)

pany with plenty of crude oil and an efficient refining and transportation system still lacks something when it does not have ready outlets for all or a substantial part of its refinery output. Some economists have taken the position that in the oil business, efficient merchandizing in time will become the most important phase of the oil industry and that companies who are stressing the other phases in the future will have the cart ahead of the horse.

The expansion in refinery controlled sources of distribution has been outstanding over the past year. The growth has taken two forms. Some refiners are going into new sections and building their own bulk and service stations. Other companies are pursuing a policy of buying out independent jobbing concerns which have been in operation for several years. This absorption process has been carried to the point where there are now relatively few large jobbers left in the marketing end of the business. Even in cases where no purchase of properties is involved there are oftentimes agreements between jobbers and refiners which give the latter control over the marketing operations.

Some of the larger independent producing and refining companies have been particularly aggressive in acquiring their own marketing outlets. The case of the Phillips Petroleum Co. is typical of a trend in which a company operated for years as a producing unit has found it necessary to enter the refining and marketing divisions. The company less than three years ago acquired a small refinery in the Texas Panhandle. This plant has been enlarged until it now has a capacity of 10,000 bbls. daily and this is to be increased to 15,000 bbls. daily. Within a few months it is probable the company will find a second refinery necessary. In the marketing end over the past two years the company has bought and built a large number of new stations in the Southwest and Middle West so that it now has over 6,000 outlets which take more gasoline than is available from the one refinery.

The Mid-Continent Petroleum Corp., Paragon Refining Co., Skelly Oil Co., Barnsdall Oil Co. and Independent Oil & Gas Co. are among the stronger independent units which are rapidly enlarging their controlled marketing outlets.

While these companies are expanding sectionally some of the major concerns apparently have a national distribution in mind such as is now being perfected by The Texas Corporation and Shell companies. The latter interests over the past six months have started distribution in every state in the United States and some of the provinces of Canada.

Consolidation is obviously the best method for most of the larger companies to secure this national distribution. To build new stations simply means additional distributing units in a field already too crowded.

The Continental-Marland and Prudential merger, an accomplishment of the past few months, is indicative of what can be done by mergers in the refining and marketing divisions. The Continental, operating largely in the Rocky Mountain area and Middle West, Marland in the Southwest and Middle West, and Prudential in the East were consolidated, giving the new company manufacturing facilities at widely scattered points and the nucleus for a marketing program to cover the entire country east of the West Coast states. A merger with a West Coast company or the building of a refinery in California would give the company the necessary organization for national distribution. It seems reasonable to conclude that additional mergers will be made following the Continental plan.

All of the Standard companies have made progress in wide scale operation. These companies are handicapped in that under the dissolution decree of 1911 they cannot reconsolidate certain units although this is the obvious economical procedure for everybody concerned. At the same time there are certain restrictions in regard to taking over independent units which are competing with them in the sale of products. This leaves the consolidation programs confined to independent units operating in other marketing territories.

The outstanding expansion among the Standard units is that of the Standard Oil Co. of Indiana, although all of the standard companies are enlarging their operations with little regard to territorial marketing divisions. The Standard of Indiana, through its acquisition of the Midwest Refining Co. in the Rocky Mountain area and the Pan American subsidiaries in the south and east, has a large distribution outside of the Middle Western states where the parent company has been the most important marketing concern for many years.

The Standard Oil Co. of New Jersey, Standard Oil Co. of California, Standard Oil Co. of New York and the Atlantic Refining Co. are the other Standard units which have extended their marketing operations over the past two years. The operations of these companies as yet do not approach the Texas and Shell companies in extent of domestic marketing area.

Twenty Leading Companies

The accompanying table gives a list of the 20 leading companies in the oil industry, based on crude oil capacity at refineries. This table shows that the first 10 companies operating 89 refineries have a crude oil capacity of 2,172,900 bbls. daily, or 63 per cent of the total capacity in the United States.

The first 20 companies, operating 132 refineries, have a total capacity of 2,699,300 bbls. daily, which is 78 per cent of the total capacity in the United States. With 341 operating refineries this means that 209 smaller refineries have 22 per cent of the total capacity in the United States. The 20 companies named could refine all the domestic and imported crude oil now being refined in the United States.

A study of the table will give further indication of the fact that additional mergers among major companies can be made without any large duplication of refineries or marketing facilities. The table does not include a number of operators which constitute the second group of 20 companies. This list would include Independent Oil & Gas Co., Barnsdall Oil Corp., Skelly Oil Co., Champlin Refining Co., Paragon Refining Co., and a number of companies which are large enough to be considered major industrial units. Some of these companies, due to their large crude oil production, have greater assets than the companies listed in the first 20 refining companies and for that reason will receive consideration in any major consolidation programs.

OPERATORS MEET IN ROCKY MOUNTAIN AREA

(Continued from Page 48)

ship." Mr. Ellison is vice president of the Midwest Refining Co. in charge of all field work. He told of the benefits the Midwest Co.'s employes had derived from the program of "Safety First" and also the benefit that accrued to the company itself through better work and fewer accidents.

Mr. Ellison gave some interesting statistics regarding accidents since 1926. In that year the Midwest Refining Co. had 2,702 employes and there were 484 lost time accidents. In 1927 the number of employes was 2,341 with only 159 lost time accidents and in 1928 the company had 2,029 employes and only 42 lost time accidents.

Mr. Ellison attributed the excellent results to the fact that the Midwest Refining Co. started the campaign by calling all the foremen and superintendents into a conference and then placing the issue up to these men entirely. Every foreman is responsible for any accident to workers under his charge. One of the outstanding results of the campaign was the suspension of dues collected from workers of the Midwest Refining Co., because there have been so few accidents.

At the afternoon session Dr. S. H. Diggs, director of research of the Standard Oil Co. of Indiana gave a very interesting paper on Oil Roads in the Inter-Mountain Region.

The discussion was led by Highway Engineer Bowman of the Wyoming state highway department and it quickly developed that practically every speaker was heartily in favor of this new system of road making and hoped to see its extension to all highways of the Inter-Mountain Region.

Deep Sand Development

C. D. Buffet, petroleum engineer, read an instructive thesis on the Deep Sand Development of the Salt Creek Field, illustrated with maps and charts.

J. H. Reece, metallurgist of the Colorado Fuel & Iron Co. at Pueblo, delivered a paper on the metallurgy of steel in equipment.

R. S. Shannon was chairman the second day. The first paper was that of W. W. Moore, production engineer of the Texas Production Co. on "Importance of Pres-

sure Control on Small Flowing Wells."

F. M. Cole, assistant petroleum engineer of the United States Geological Survey, at the Salt Creek Field followed with a paper "Improved Recovery Methods in Salt Creek Field."

The dinner talks were under the auspices of the National Safety Council, Boyd Osborn, chairman. R. M. Andrus manager of Plant No. 1 at the Standard Oil Co.'s refinery at Casper, spoke on "Safety at Refineries."

Mr. Andrus was followed by Frank B. Taylor, Jr., manager of the Continental Oil Co.'s station No. 1 at Casper on "Avoiding Dangers at the Filling Stations."

The afternoon session was called to order by Chairman B. B. Brooks, and the first paper was delivered by J. W. Steele, supervisor of the Rocky Mountain region for the United States Geological Survey, on the unit plan of operation.

W. F. Wilkerson, manager of the Wyoming Automotive Co. of Casper, followed with a paper on the taxation of gasoline sales, warning there is danger the states may place this tax at such a point it would work injury on the automobile and petroleum industries.

Election of Officers

Former Governor B. B. Brooks was re-elected president without a dissenting vote. The other results of the balloting follow: John McFadyen, Ohio Oil Co., first vice president; E. B. Coolidge, Great Falls, Mont., second vice president; D. W. Greenburg, Casper, secretary; and C. B. Richardson, Cheyenne, treasurer.

The board of directors remains practically as last year as follows: John G. McFayden, Ohio Oil Co., Casper; W. D. Weathers, Fargo Oil Co., Casper; R. S. Shannon, Continental Oil Co., Denver; A. G. Dana, Prairie Oil & Gas Co., Independence, Kans.; C. B. Richardson, Consolidated Royalty Oil Co., Cheyenne; E. B. Coolidge, Homestake Oil Co., Great Falls, Mont.; J. C. Howard, Utah Oil & Refining Co., Salt Lake City; A. R. Wilson, The Texas Company, Denver; R. W. Loucks, Carter Oil Co., Casper; R. S. Ellison, Midwest Refining Co., Casper; R. B. Leggett, Texas Production Co., Casper; E. J. Sullivan, E. T. Williams Oil Co., Casper; M. T. Rathvon, Argo Oil Co., Casper; H. H. Schwartz, Empire State Oil Co., Casper; A. D. Aiken, Midwest Refining Co., Denver; and Charles Orchard, Cody, Wyo.

Among the resolutions adopted was one asking President Hoover to rescind his order affecting the Rocky Mountain region as there is no overproduction in this region and since the production of this region has shown a steady decline since 1923, with a decline of 40 per cent in 1928, there is no need of a federal conservation policy to protect this section.

A second resolution asked the State of Wyoming to call the attention of the public in general to the excellence of the new system of oiled roads being built in this State with the asphaltic oils produced in this State, to the end that black oil fields now shut in may find a market.

The third resolution called for a committee of three to confer with the State Land Board of Wyoming to endeavor to arrange a better lease form for operators on state lands.

The fourth resolution called for the State to grant mineral lease for a period of 20 years instead of five years as now.

The fifth resolution called for the purchase of books on mineralogy, geology and kindred sciences by the various libraries supported by taxation in the State of Wyoming.

The sixth and last resolution commended the stand taken by the governors of the Rocky Mountain states in regard to the federal conservation policy.

INFLUENCE OF HIGH PRESSURE CRACKING

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cracked gasoline.[5] Figures obtained on extensive cracking of heavy Baku gas oil show that the yield of cracked gasoline at high pressures is 2 per cent lower than at 10 atmospheres. The yield of cracked gasoline simultaneously decreased by 3½ to 6 per cent. Therefore, as should be expected in this case, with a very prolonged cracking the influence of the pressure on the total yield on cracked products of decomposition is slightly higher than in the previous case. It should be noted that the duration of cracking which was 50 minutes at 450 degrees Centigrade corresponds to five hours at 425 degrees Centigrade.

To explain further the influence of pressure, the cracking of Groznuii treated paraffin wax of 57 degrees Centigrade melting point was investigated at various pressures (see Table 4).

Note: The cracking operation was slightly modified in experiments No. 14 and No. 15. The apparatus was cooled down as soon as the pressure reached 100 atmospheres, the gases were then released and the apparatus was then brought up again in temperature, etc. In this way the cracked distillate was completely withdrawn.

The yield of cracked gasoline is nearly constant, decreasing only slightly at 40 atmospheres. The yield of cracked kerosene decreases sharply on changing from 10 to 20 atmospheres, otherwise remaining stable. The cracking operations conducted at 100 atmospheres and over different periods of time are interesting mainly on account of their influence on the composition of cracked gasoline (see Table 5).

If we added the yields of cracked gasoline and kerosene together as given in Table 4 the following total yields in cracked fractions below 300 degrees Centigrade are obtained: 73.7 per cent (10 atmospheres); 62.5 per cent (20 atmospheres); 65.4 per cent (30 atmospheres); 61.3 per cent (40 atmospheres); 64.3 per cent (30 atmospheres).

Yields Below 300 Degrees Centigrade

The yield of cracked products below 300 degrees Centigrade decreases sharply on going from 10 to 20 atmospheres pressure and then changes only slightly with increase in pressure. The influence of pressure on the yield of cracked gasoline in any case is not great.

To determine the influence of the pressure on the chemical composition of cracked gasolines, iodine numbers and aniline points of the latter were determined. They are given in Table 5.

The iodine numbers of cracked gasoline decrease rapidly with the increase in pressure. Thus the cracked gasoline from heavy Baku gas oil distillate obtained in 48 minutes at 450 degrees Centigrade and 10 atmospheres had an iodine number of 144.9, while the cracked gasoline obtained from the same stock and under similar conditions but at 100 atmospheres pressure had an iodine number of 51.2, i.e., about three times lower than at 10 atmospheres.

Parallel with the decrease in the amount of unsaturated hydrocarbons, the anilene points of the cracked gasolines increase with increasing pressure.

This indicates that the formation of naphthene hydrocarbons in cracked gasolines does not take place in parallel with the decrease in the amount of unsaturated hydrocarbons. It is possible that a part of the unsaturated hydrocarbons of the cracked gasoline changes into higher boiling fractions through polymerization.

A number of cracked gasolines and kerosenes obtained at various pressures were separated from the unsaturated and aromatic hydrocarbons by treatment with one volume of 98 per cent sulphuric acid followed by distillation within the previous temperature limits. This was undertaken to determine the effect of high pressures on the conversion of unsaturated into naphthene hydrocarbons. The constants given in the two last columns of Table 5 were determined by the above method for mixtures of naphthene and paraffin hydrocarbons so obtained.

Increased Pressure

The data in Table 5 show that a comparatively small increase in naphthene hydrocarbons in cracked gasolines takes place on changing the pressure from 10 to 40 atmospheres. Thus the treated cracked gasoline from Surakhanui fuel oil obtained at 10 atmospheres pressures had an aniline point of 71.3 degrees Centigrade while the gasoline produced at 40 atmospheres had an aniline point of 69.3 degrees Centigrade. The difference of 2 degrees Centigrade corresponds to a 6-7 per cent increase in naphthene hydrocarbons calculated on the gasoline freed from aromatic and unsaturated hydrocarbons, and 3-4 per cent on untreated gasoline. A further increase of pressure with a light cracking has not much influence on the chemical composition of cracked gasolines and kerosenes, while heavier cracking and a further increase in pressure have a considerable influence on an increased formation of naphthene hydrocarbons.

This phenomenon could be observed especially in cracked kerosene from paraffin wax (see Experiments 9-15, Table 5) increases steadily with the increase in pressure. The specific gravity amounted to 0.784 at 10 atmospheres pressure while at 100 atmospheres it went up to 0.836. Particularly interesting are the properties of the same cracked kerosenes after the removal of unsaturated hydrocarbons and aromatics. A treated cracked kerosene obtained by cracking for 64 minutes at 450 degrees Centigrade and 10 atmospheres had a specific gravity of 0.775 and an aniline point of 83.9 degrees Centigrade, while a treated kerosene obtained by cracking for 81 minutes at 450 degrees Centigrade and at 100 atmospheres had a specific gravity of 0.813 and an aniline point of 67.5 degrees Centigrade.

Assuming, according to Carpenter, that 1 per cent of naphthene hydrocarbons in kerosene fractions causes a 0.2 degree Centigrade aniline point depression, the conclusion can be drawn that an increase of 82 per cent in naphthene hydrocarbons has taken place in this particular case, calculated on the treated kerosene and approximately 50 per cent calculated on the untreated kerosene. It could be said that the cracked kerosene, from Experiment 15, is composed practically of naphthene hydrocarbons only after the aromatic and unsaturated hydrocarbons have been removed, while a similar kerosene from Experiment 9 consists almost exclusively of paraffin hydrocarbons. From this example it is clear that the amount of naphthene hydrocarbons can be controlled to a large extent in cracked products by varying the pressure.

[5] The Oil and Gas Journal, 1927, June 23, p. 144.

HOWARD—GLASSCOCK PRORATION EXTENDED

(Continued from Page 37)

Four cents per degree is now paid for crude running above 29.9.

E. E. Andrews, proration umpire of the Howard-Glasscock Pools, said the west end is suffering for pipe line relief, and there should be some equitable plan devised for treating all producers alike, but such plans and methods as used in the field would be left up to the companies and their representatives to work out.

Warner Clarke, of the California Co., said he believed it the best policy to put the whole field on the same basis of proration, consequently a motion was made that proration should be extended over the whole Howard-Glasscock County Pool, and this motion carried. Another motion was made to have the wells pumped on a two-hour test for proration purposes, the umpire taking the second hour's gauge as the one on which to base his determination for the well's daily allowance. This motion was also carried, consequently the wells will be tested in that manner beginning December 1 when the present proration period runs out and the new one begins.

There have been some discrepancies in regard to some of the wells and leases producing more than others, therefore the motion to have the umpire make adjustments for these discrepancies was carried, and the umpire will make these adjustments the best way he sees fit. These adjustments will not have to be made all at once, but can run over a period of two or three months.

With the new method for gauging the wells, and the plan for prorating the fields, as a whole, the pipe line companies will announce the amount of crude each will take for the coming month. This announcement is to be made about 10 days before the month's runs are to start, and will help the umpire in making up his proration reports.

John R. Suman, director and production executive of the Humble Oil & Refining Co., Houston, said he believed the price schedule mentioned by Doctor Schwitalla would be more correct for the crude from these fields, and that the Humble Pipe Line Co. would purchase on those prices.

George N. Moore, of the Cosden Oil Co., Inc., Fort Worth, said Cosden had had about 200,000 bbls. of crude in storage for the past two months, in the Howard-Glasscock Field, that the company handled about 13,000 bbls. daily in October and were handling 11,000 bbls. daily for the month of November. He also spoke in favor of some change in prices for crude from these fields and mentioned cold weather, gas prices dropping, and shutting down of refineries during the next two or three winter months, as factors influencing present crude runs and

TABLE 5—IODINE NUMBERS AND ANILINE POINTS OF CRACKED GASOLINE OBTAINED AT VARIOUS PRESSURES

No. of experiment	Original stock	Cracking conditions: Temperature °C.	Cracking conditions: Pressure atmospheres	Cracking conditions: Duration minutes	Properties of cracked gasoline: Specific gravity at 15°C.	Properties of cracked gasoline: Iodine number	Properties of cracked gasoline: Aniline point °C.	Properties of cracked kerosene (200-300°C. fraction): Specific gravity at 15°C.	Properties of treated cracked gasoline: Specific gravity at 15°C.	Properties of treated cracked gasoline: Aniline point °C.	Properties of treated cracked kerosene (200-300°C. fraction): Specific gravity at 15°C.	Properties of treated cracked kerosene (200-300°C. fraction): Aniline point °C.
1	Surakhanui fuel oil	425	10	98	0.736	126.5	44.7	0.835	0.725	67.1	0.802	71.3
2	Surakhanui fuel oil	425	20	94	0.738	89.4	46.8	0.839	0.722	65.0	....	....
3	Surakhanui fuel oil	425	40	94	0.731	70.7	51.2	0.839	0.719	65.2	0.814	69.3
4	Surakhanui fuel oil	425	80	90	0.732	64.3	51.1	0.838	0.717	65.5	....	....
5	Baku heavy gas oil distillate	450	10	48	0.747	144.9	37.1	0.866	0.727	65.4	0.834	66.1
6	Baku heavy gas oil distillate	450	20	51	0.741	131.0	40.3	0.864	0.723	65.3	....	....
7	Baku heavy gas oil distillate	450	40	52	0.748	83.6	41.2	0.878	0.729	61.9	0.847	62.8
8	Baku heavy gas oil distillate	450	100	59	0.766	51.2	33.4	0.929	0.732	59.9	....	....
9	Paraffin wax	450	10	64	0.717	129.0	49.2	0.784	0.710	70.5	0.775	83.9
10	Paraffin wax	450	20	64	0.718	110.9	50.6	0.791	....	....	....	....
11	Paraffin wax	450	30	65	0.709	100.4	50.5	0.793	....	....	....	....
12	Paraffin wax	450	30	65	0.717	93.1	51.1	0.799	....	....	....	....
13	Paraffin wax	450	40	62	0.715	79.7	52.1	0.806	....	....	....	....
14	Paraffin wax	450	100	40	0.716	63.6	55.7	0.810	....	....	....	....
15	Paraffin wax	450	100	81	0.728	....	50.4	0.836	0.709	63.0	0.813	67.5

prices. Doctor Schwitalla's plan seemed to meet with Mr. Moore's approval.

The Shell Pipe Line Co., Humble Pipe Line Co., Cosden Oil Pipe Line Co., and the Magnolia Pipe Line Co. are the four majors serving the field at present, but the Magnolia is taking only its own production therefore it is eliminated from the number of lines taking production from all over the fields. The Col-Tex Refining Co. takes a little oil from this field and the Big Spring Pipe Line Co. takes a small amount daily, but the first three companies mentioned are the largest servers of the fields and will be looked to for relief in the pipe line situation.

May Accept Change

There are several wells to be drilled in the west end, in the extensions, and December's daily potential will no doubt be higher than the present potential, consequently the new wells will have to be considered when allowances are made for connections and production for the coming month. The present potential of the fields is 56,000 bbls., and this will undoubtedly be higher when other good sized wells are drilled in on the extension.

It is believed all the producers in the field will be agreeable to the change in prices of the crude, due to the fact that they all want to sell their oil, and the following month will no doubt see posting of new prices to take effect the first of December, and that the new plan of prorating the field as a whole will be the most agreeable and equitable, although the east side of the field, the first to produce, will have to give way to the west side, or the new production, and be curtailed in order to help the west end in production and pipe line relief. Some of the producers in the east end, not having production in the west end, might think this detrimental to their good, but petroleum engineers speaking in the meeting said that cutting down production in the wells now making water would not work any ill effect on those wells, and they would eventually produce as much oil as if allowed to produce at their present rate. Practically every well in the east end is making water, some to a great extent, while water in the west end is showing up in many wells, but not all of them.

Out of town men attending the meeting were: R. D. Parker of the Railroad Commission of the State of Texas, Austin, Tex.; Dr. A. Wade Schwitalla, manager of the crude oil purchasing department of the Shell Petroleum Corp., St. Louis, Mo.; Virgil Hicks, of the Owen & Sloan Oil Co., Tulsa, and John R. Suman, of the Humble Oil & Refining Co., Houston.

OIL IN BOUNDARY DISPUTE

Among the points at issue in the boundary dispute between Bolivia and Paraguay is the oil field in the Chaco region between the two countries. Standard Oil Co. has bored five wells which have been capped to await exploitation when the title to the Chaco has been determined.

WILBUR SAYS OIL INDUSTRY CAN HELP

(Continued from Page 37)

the idea is no longer new. Even among such states, there has not always been immediate acceptance of the idea that they would have to control themselves to obtain harmony with others as in some instances this involves a curtailment of what they had come to believe was their right. But they are learning that when people have rights that are intertwined with the rights of others, they must agree upon a plan to treat all of their interests jointly and as a single interest.

"The development of state compacts to control the production of petroleum and the conservation of natural gas, embodies the same principles as those that control compacts relating to water rights, flood control, etc.

Industry Better

"The fact is the oil industry has had a little sickness but it is beginning to feel better. As our medical friends might say the oil industry has held down its medicine and it is doing some good. There are now more constructive forces at work to try to do a better job in discovery, drilling, production and marketing of oil than a few months ago. We are conscious here in Washington that these forces are at work. The drastic action in the California field to check overproduction that came from the industry itself is an evidence of that, and the gas law now before the courts of California awaiting a decision, is another indication of what the oil men are trying to do. If that law to control the natural gas to avoid waste is not upheld, I think the industry itself will seek other means of control.

"These remedies are being applied to a local field in which there were marked abuses. The result of what is being done in California will affect the oil industry throughout the United States and, in fact, over the entire world.

"If the oil industry continues to jog along on the lines of progress I have suggested, it will fit into the requirements of the country better than by adopting any dramatic or unusual performance of any kind. The elimination of waste of all kinds will tend to enrich everyone, the oil industry itself, the industries that are dependent upon the products of petroleum, and the public at large, which is so immediately and vitally concerned in having an adequate supply of gasoline and other products.

"We can also improve the methods of marketing oil. The time was when the railroads believed that each system should have the advantage of a separate station. Now the thought of union stations is so common that it is regarded as a natural result of service to a community with numerous systems of transportation. There seems to be no reason why the union station idea should not be applied to the marketing of oil for the convenience of the public."

WILDCAT OPERATIONS IN WEST TEXAS

(Continued from Page 69)

Grastorf et al's No. 1 Redfield, 920 ft. from N and 2,500 ft. from E of Sec. 18, Blk. G-15, G.C.&S.F.R.R. Sur.—Building Rig

J. M. Hickey's No. 1 Jackson & Harmon, NE cor., Sec. 182, Blk. 9, G.H.&S.A. Sur.—Shut down 1,302 ft.

Van McPhail's No. 1 McIntyre, SE cor. Sec. 59, Blk. 352, 7 mi. S of Alpine—Shut down 1,740 ft.

COKE COUNTY

Lipan Oil Co.'s No. 1 E. C. Rawlings, Sec. 390, Blk. 1-A, H.&T.C. Sur., elev. 2,750 ft.—Shut down 2,892 ft.

Mid-Kansas Oil Co.'s No. 1 W. E. Lackey, 320 ft. N and E of SW cor., Sec. 272, Blk. 1-A, H.&T.C.—Pay 3,755-56 ft.; 6⅝-in. casing set 3,451 ft.; underreaming at 4,058 ft.; total depth 4,224 ft.

CONCHO COUNTY

Duffy et al's No. 1 Callan, 1,520 ft. N and 1,120 ft. W of SE cor., Sec. 21, Blk. 10, H.&T.C.R.R.—Spudded and shut down.

Lamb & Slick's No. 1 Mosely, 2,490 ft. from N and 150 ft. from W of Sec. 1,338, Bachinan Sur.—S. D. 451 ft.

Turner et al's No. 1 Borsig, 150 ft. from S of SE cor. G. Emig Sur. 130, 6 mi. W of Paint Rock—Shut down 735 ft.

CRANE COUNTY

Church & Field's No. 4 University-Dewell, 2,310 ft. N and 990 ft. E of SW cor. Sec. 39, Blk. 30, University Land—Flowed 400 bbls. 2,862 ft.; drlg. 2,902 ft.

Duffey et al's No. 7 Cowden Bros., 1,320 ft. from S and 1,420 ft. from E of Sec. 18, Blk. X, C.C.S.D.&R.G. N.G.R.R. Sur.—Location.

Gulf Prod. Co.'s No. 69 McElroy, 1,442 ft. S and 320 ft. E of NW cor. Gulf's lease, Sec. 185, Blk. F, C.C.S.D. &R.G.N.G.R.R. Sur.—Top salt 1,180 ft.; drlg. 2,130 ft.

Gulf Prod. Co.'s No. 70 McElroy, 1,442 ft. S and 2,970 ft. W of NE cor. of Gulf's lease out of Sec. 201, Blk. 5, C.C.S.D.&R.G.N.G.R.R. Sur.—Drlg. 1,275 ft.

Humble O. & R. Co.'s No. 2-D University, 990 ft. from W and 330 ft. from S of NW Sec. 34, Blk. 30.—Top lime 2,858 ft.; drlg. 3,065 ft.

Republic Prod. Corp.'s No. 1 Hughes, 990 ft. from N and 1,650 ft. from W of their lease, Sec. 2, Julia Prather Sur.—Drlg. 300 ft.

Simms-Atlantic's No. 2-F University, Sec. 45, Blk. 30, 2,310 ft. from N, 330 ft. from E, University—Top salt 1,020 ft.; drlg. 2,915 ft.

The Texas Company's No. 3 University, 330 ft. N and E of SW of N half Sec. 46, Blk. 30, University Land—Top salt 1,005 ft.; S. D. 2,655 ft.

The Texas Company's No. 2 University-Beasly, 330 ft. S and E of NW of S half Sec. 46, Blk. 30, University Land—Top lime 2,725 ft.; total depth 3,000 ft.; top pay 2,850 ft.

Tidal Oil Co.'s No. 2 University D, 330 ft. S and W of NE cor. NW of SW Sec. 34, Blk. 30, University Land—Top pay 2,955 ft.; oil rose 2,000 ft. in hole; total depth 3,032 ft.

Tidal Oil Co.'s No. 3 University-E, 330 ft. N and E of SW cor. E half of NW Sec. 39, Blk. 30, University Land—Location.

Warner-Quinlan Co.'s No. 6 University, 330 ft. S and E of NW of E half of SW Sec. 39, Blk. 30, University Land—Location.

CROCKETT COUNTY

California Co.'s No. 1 Shannon, Lease 3, 1,663 ft. N and 2,323 ft. W of SE cor. Sec. 42, T.C.R.R.—Building rig.

Cushing R. & G. Co.'s No. 3 Powell, 330 ft. from S and E of Sec. 53, Blk. BB, G.C.&S.F.R.R. Sur.—Rigging up

Empire Gas & Fuel Co.'s No. 1 Shannon, 330 ft. from N and E of Sec. 42, T.C.R.R. Sur.—Drlg. 405 ft.

Lewis & Daniels' No. 1 Pecos River Bed, 19 yards S and 37 degrees E of NW cor., Sec. 33, Blk. 1, L&G.N. Sur.—Shut down 1,355 ft.

Magnolia Pet. Co.'s No. 1 Hoover, 2,310 ft. from N and 330 ft. from E of Sec. 13, Blk. 1, G.C.&S.F.R.R. Sur.—Location.

T. P. Coal & Oil Co.'s No. 1 Shannon, 330 ft. from S and W of Sec. 44, T.C.R.R. Sur.—Drlg. 290 ft.

CULBERSON COUNTY

Grisham & Hunter Oil Corp.'s No. 1 fee, 330 ft. from S and W of Sec. 14, Blk. 59, T.&P.—Oil show 1,437 ft.; drlg. 2,500 ft.

Grisham & Hunter's No. 1 Seay, 330 ft. from S and W of Sec. 16, Blk. 59, Twp. 7, T.&P.R.R. Sur.—Hole full sulphur water 2,590 ft.; running 8-in. casing 2,605 ft.

Grisham-Hunter's No. 3 Seay, 330 ft. from S line, 330 ft. from W line, Sec. 16, Blk. 59, Twp. 7—Moving in machinery.

Hickey & Stiver's No. 1 C. O. Finley, 600 ft. N and 1,980 ft. W. Sec. 20, Blk. 32—Small show oil 1,331 ft.; shut down 2,260 ft.; hole full water; elev. 3,874 ft.; shut down for 30 days.

West Coast Oil & Exploration Co.'s No. 1 McGregor, C NW, Sec. 14, Blk. 31—Slight show oil 740 ft.; shut down 825 ft.; repairing engine.

Scott & Dittman's No. 1 Miller, 1,160 ft. N and 2,480 ft. E. Sec. 1, Blk. 97, Public School Land—Rainbow 1,056 ft.; 300 ft. sulphur water 1,725 ft.; oil show 2,538 ft.; hole full sulphur water; running 6-in. casing; shut down 3,508 ft.

ECTOR COUNTY

Anderson's No. 1 fee, 1,320 ft. E along N line, Sec. 19, and 150 ft. N at right angles with line, Sec. 18, Blk. B-16, Public School Land—Moving in material.

Penn-Humble's No. 1 York, 330 ft. N, 2,640 ft. W. Sec. 16, Blk. 44, Twp. 3s, T.&P.R.R. Sur.—Drlg. 780 ft.

EL PASO COUNTY

Layter's No. 1 Malone, 2,200 ft. SW and NW, Sec. 46, J. M. Day Sur.—Fishing tools 1,481 ft.

EDWARDS COUNTY

A. M. Griffith's No. 1 Wardlow, Sec. 60, V-8, J. C. Clift Sur.—Shut down 3,000 ft.

FISHER COUNTY

Cranfill & Reynolds' No. 1 Bledsoe, 330 ft. N and E of SW SE, Sec. 200, B.B.B.&C.R.R. Sur.—Spudding

Landreth Prod. Corp.'s No. 2 Cooper, 330 ft. S and W of NE cor. Sec. 116, Blk. 1, H.&T.C.R.R. Sur.—Drlg. 2,385 ft.

Magnolia Pet. Co.'s No. 1 Lee, Sec. 357, 2,310 ft. from N and 4,286 ft. from W—Underreaming 6-in. at 3,550 ft. drlg. 3,640 ft.

Midwest Oil Co.'s No. 1 Steele, 660 ft. from S, 440 ft. from W, Sec. 210, Blk. 1—Show oil 2,940-45 ft.; top pay 3,192 ft.; shut down 3,193 ft. for storage.

Roeser-Pendleton and Amerada's No. 1 First Nat'l Bank of Waco, 660 ft. N and 600 ft. W of SE cor. NE of Sec. 204, B.B.B.&C. Sur.—Drlg. 2,045 ft.

GAINES COUNTY

Louisiana O. & R. Co.'s No. 1 Ralph, 1,320 ft. from S and W of Sec. 7, Blk. A-28, Public School Land—Underreaming at 850 ft.

GARZA COUNTY

Pandem Oil Corp.'s No. 1 Stokes, 2,310 ft. N and E of SW Section 32, Blk. 5, G.H.&H.R.R. Sur.—Drlg. 1,815 ft.

Bell Thompson's No. 1 Tuffing, 330 ft. from S, 2,310 ft. from E, Sec. 10, Blk. 6, H.&G.N.—Shut down 2,610 ft.

GLASSCOCK COUNTY

The California Co.'s No. 3 Currie, 990 ft. S and 2,310 ft. W of NE cor., Sec. 219, Blk. 29, W.&N.W.R.R. Sur.—Shut down 3,177 ft.

California Co.'s No. 1 Jones, 330 ft. S from N and E lines, Sec. 25, Blk. 33, Twp. 2s, T.&P. Sur.—Rig.

Chal Daniel et al's No. 1 Meek, 2,310 ft. W and 1,600 ft. N of SE cor., Sec. 7, Blk. 34, Twp. 3s, T.&P. Sur.—Shut down 1,147 ft.

Glasscock et al's No. 1 Edwards, 330 ft. from S, 1,650 ft. from E, Sec. 18, Blk. 33, Twp. 2s, T.&P.R.R. Sur.—Drlg. 2,183 ft.

Kirby Pet. Co. et al's No. 2 Baker, 990 ft. S and 330 ft. E of NW cor. Sec. 23, Blk. 33, Twp. 2s, T.&P.R.R. Sur.—Topped lime 2,040 ft.; S. D. 2,068 ft.

Lion O. & R. Co.'s No. 2 Coffee, 330 ft. from N and 990 ft. from E of Sec. 22, Blk. 33, Twp. 2s—2,000 ft. oil in hole 2,224 ft.

Lion Oil & Ref. Co.'s No. 3 Coffee, 990 ft. S and 330 ft. W of NE cor. Sec. 22, Blk. 33, Twp. 2s, T.&P.R.R. Sur.—Topped lime 2,053 ft.; setting pipe 2,068 ft.; S. D. 2,071 ft.

Shell Pet. Corp.'s No. 1 Coffee, 330 ft. from S and 1,650 ft. from E of Section 15, Blk. 33, Twp. 2s—Top pay 2,098 ft.; shut down at 2,239 ft.; 1,600 ft. oil, 600 ft. water in hole; cem. from 2,239 ft. back to 2,222 ft.

Simms Oil Co.'s No. 1 Coffee, 330 ft. from N and 1,650 ft. from E of Sec. 22, Blk. 33, Twp. 2s, T.&P.—Drlg. 2,059 ft.

E. L. Smith Oil Co.'s No. 2 Coffee, 330 ft. from S and 990 ft. from E of Sec. 15, Blk. 33, Twp. 2s, T.&P.—Undereaming 935 ft.

Sun Oil Co.'s No. 4 Phillips, 330 ft. N and 990 ft. W of SE cor. Sec. 14, Blk. 33, Twp. 2s, T.&P.R.R. Sur.—Top lime 2,085 ft.; cementing 8-in. casing 2,105 ft.

World Oil Co.'s No. 2-C McDowell, Sec. 21, Blk. 34, Twp. 2s, 330 ft. S and 2,310 ft. E of NW cor.—Rigging up tools.

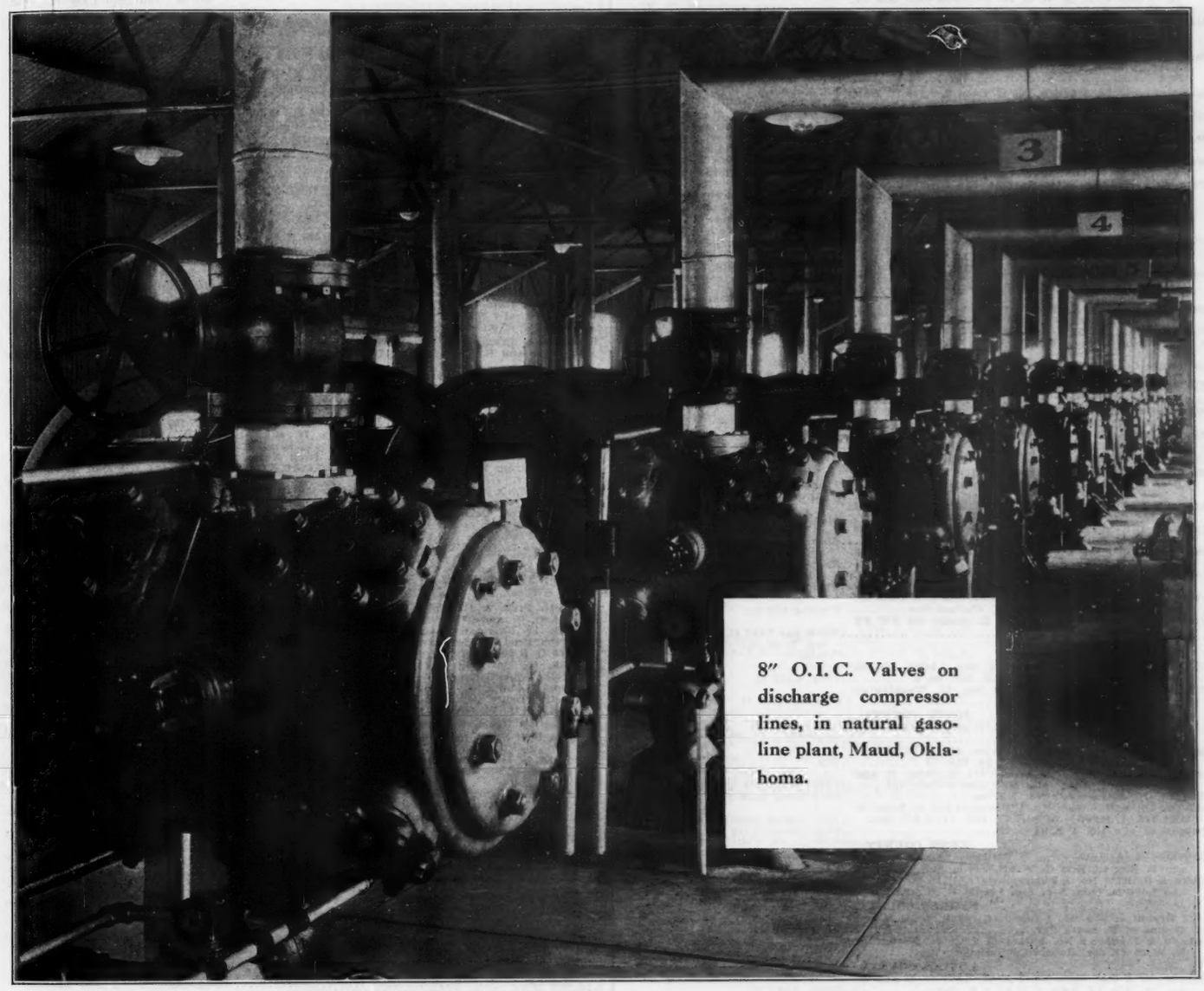
HOWARD COUNTY

American Maracaibo's No. 2-B Settles, 990 ft. N and 2,310 ft. E of SW cor., Sec. 135, Blk. 29, W.&N.W. R.R. Sur.—Location.

Continental Oil Co.'s No. 2 Clay, Lease 1, 330 ft. N and 990 ft. E of SW cor. Sec. 127, Blk. 29, W.&N.W.R.R. Sur.—Rigging up

Continental Oil Co.'s No. 5 Kloh-Rumsey, 2,310 ft. S and 990 ft. W of NE cor. Sec. 13, Blk. 33, Twp. 2s, T.&P.R.R. Sur.—Running 8-in. casing 2,078 ft.

O.I.C. VALVES



8″ O.I.C. Valves on discharge compressor lines, in natural gasoline plant, Maud, Oklahoma.

STANDARD OF THE OIL FIELDS

in VALVE VALUE

OIC

Distributed by

INTERNATIONAL Supply Company

Continental Oil Co.'s No. 3 Clay-F, 250 ft. S and 660 ft. W of NE cor., Sec 138, Blk. 129, W.&N.W.R.R. Sur...Show oil 2,595-2,675 ft.; shut down 2,750 ft.

Cosden Oil Co.'s No. 6 Roberts-A, 200 ft. N and E of SW cor., Sec. 139, Blk. 29, W.&N.W.R.R. Sur. ..... Shut down 1,456 ft.

Empire Gas & Fuel Co.'s No. 4 Clay, 330 ft. N and 2,310 ft. W of SE cor. Sec. 127, Blk. 29, W.&N.W.R.R. Sur. ..... Location.

Group No. 1 & Continental Oil Co.'s No. 7-A Settles, 1,650 ft. N and 2,310 ft. W of SE cor. Sec. 135, Blk. 29, W.&N.W.R.R. Sur. ..... Show oil 2,272 ft.; rigging up standard tools 2,942 ft.

Group No. 1 & Continental Oil Co.'s No. 8-A Settles, 990 ft. N and 2,310 ft. W of SE cor. Sec. 135, Blk. 29, W.&N.W.R.R. Sur. ..... Coring 2,520 ft.

Magnolia Pet. Co.'s No. 1 Snyder, 330 ft. from N and 990 ft. from W Sec. 36, Blk. 30, Twp. 1s, T.&P. R.R. Sur. ..... Location.

Magnolia Pet. Co.'s No. 13 Dora Roberts, 2,440 ft. N and 1,650 ft. E of SW cor. Sec. 136, Blk. 29, W.&N.W. Sur. ..... Shut down 2,927 ft.

Merriwether's No. 1 Smith, 150 ft. from S. 2,490 ft. from W, Sec. 45, Blk. 33 ..... Drlg. 1,475 ft.

Midwest Exploration Co.'s No. 5-C Clay, 990 ft. from E and S Sec. 138, Blk. 29, W.&N.W.R.R. Sur. ..... Location.

Moody Oil Corp.'s No. 29-B, Sec. 137, Blk. 29, 330 ft. from N and 1,650 ft. from W ..... Top pay 1,890-1,911 ft.

Moody Oil Corp.'s No. 23-B Roberts, 990 ft. from N and W of Sec. 137, Blk. 29 ..... Shut down 261 ft.

Plymouth Oil Co.'s No. 4 Abrams, 330 ft. from N and 1,650 ft. from W. Sec. 5, Blk. 32, Twp. 2s ..... Top pay 2,480 ft.; shut down 2,515 ft.; plugged back 2,505 ft.; pumped 20 bbls., 15 per cent water, in 24 hrs.; may shoot.

Pure Oil Co.'s No. 2 A. J. Hooks, 2,440 ft. N and 600 ft. E of SW cor. Sec. 140, Blk. 29, W.&N.W.R.R. Sur. ..... Drlg. 1,750 ft.

Shell Pet. Corp.'s No. 2 Abrams, Sec. 13, Blk. 35, Twp. 2s, 2,310 ft. from S, 990 ft. from E, T.&P. ..... Top pay 2,135 ft.; pumped 1,025 bbls. 24 hrs.; drlg. 2,212 ft.

Simms Oil Co.'s No. 2 Clay, 330 ft. from S, 2,310 ft. from W, Sec. 127, Blk. 29 ..... Rigging up

Ward Oil Co.'s No. 21 Roberts, 2,310 ft. N and 990 ft. E of SW cor. of Sec. 137, Blk. 29, W.&N.W.R.R. Sur. ... Location.

HUDSPETH COUNTY

California Co.'s No. 1 University, 3,821 ft. N and 2,554 ft. E of SW cor., Sec. 19, Blk. E ..... Underreaming at 2,500 ft.

George Richardson's No. 1 Paxton, 2,640 ft. from N and W, Sec. 9, Blk. 16 ..... Shut down 205 ft.

Western States Oil Co.'s No. 1 Moore, C SE Sec. 16, Blk. 71, Twp. 6, T.&P. Sur. ..... Shut down 2,760 ft.

Western States Oil Co.'s No. 1 Gardner & Moseley, NE NW, Sec. 12, Blk. 18 ..... Shut down 3,140 ft.

IRION COUNTY

Banner's No. 2 Nutt, Subdivision 5, 150 ft. from N and E of W half Gonzales County School Lands ..... Plugged back 1,365 ft.; pumped oil and water.

Beesley's No. 1 Sawyer Cattle Co., 1,320 ft. N and E of SW cor. Sec. 3,032, Blk. 24, H.&T.C.R.R. Sur. ..... Moving in material

Crawford Oil Co.'s No. 1 Williams, 450 ft. from N, 150 ft. from W, Subd. 8 ..... Shut down 1,105 ft.

Carl Cromwell's No. 1 Tankersley, 2,490 ft. from S and E. Sec. 1,219, T.C.R.R. Sur. ..... Shut down 375 ft.

Cromwell et al's No. 1 Fuller, 2,134 ft. N and 631 ft. W of SE cor., Sec. 81, Blk. 1, H.&T.C.R.R. Sur..... Fishing 710 ft.

Dennys & Andrews' No. 1 Tankersley, 2,660 ft. from W, 600 ft. from S of Sec. 4, H. N. Wallace Sur. ..... Fishing 529 ft.

Kingwood Oil Co. et al's No. 1 J. D. Suggs, SE NW SE Sec. 19, Blk. 7, H.&T.C. Sur. ..... Show gas 7 656 ft.; set 4½-in. casing 7,550 ft.; drlg. 7,734 black lime

J. A. Starkweather's No. 1 Lindley, Sec. 1,160½ ,900 ft. from S, 150 ft. from E, H.&T.C. Sur. on E ..... Drlg. 1,260 ft.

P. H. Williams' No. 1 Ash, C of Sec. 20, Washington County ..... Fishing 4,760 ft.

JONES COUNTY

J. H. Adsit et al's No. 1 Swenson, C of NE of SE, Sec. 192, B.B.B.&C. Sur. ..... Shut down 2,508 ft.

Cosden-Herbert et al's No. 3 Bickley, 330 ft. N and W of SE cor. of S half NW, Sec. 50, Blk. 18 ..... Rig.

Cranfill-Reynold's No. 1 Stevens, 990 ft. from N and 3,630 ft. from W of John McMullen Survey 337 ..... Drlg. 1,010 ft.

Mid-Tex Oil & Gas Co.'s No. 1 King ..... Shut down 1,520 ft.

Mid-Tex Oil & Gas Co.'s No. 1 Minter, 1,819 ft. from W and 765 ft. from N of Sec. 41, Blk. 15, T.&P. Sur. ... Ran 8-inch casing 1,680 ft.

Shabeen et al's No. 1 King ..... Shut down 1,835 ft.

KENT COUNTY

California & Atlantic's No. 1 Wallace, 330 ft. from S and W Sec. 60, Blk. G. W.&N.W.R.R. Sur. ..... Location.

White & Smith's No. 1 Pursley estate, 1,320 ft. from E and 2,640 ft. from S of Sec. 8, Blk. H, H.&T.B. ..... Fishing 300 ft.

KIMBLE COUNTY

C. L. Bryant et al's No. 1 Lambert, 700 ft. from N and W line of F. Lotta Sur. ..... Shut down 800 ft.

McLean & Jamison's No. 1 Cannon, 1,940 ft. N and 300 ft. W of SE cor. Robert Cochran Sur. ..... Shut down 1,350 ft.

LOVING COUNTY

Humble Oil & Ref. Co.'s No. 1 Kloh, 2,640 ft. N and W Sec. 35, Blk. 55, Twp. 2, T.&P.R.R. Sur. ..... Drlg. 3,003 ft.

Independent O. & G. Co.'s No. 1 Wheat, 330 ft. each way from W cor. of Sec. 85, Blk. 1, W.&N.W. ..... Drlg. 1,250 ft.

Lockhart Co.'s No. 3 Allen, 330 ft. from NE, 1,650 ft. from NW, Sec. 82, Blk. 33, H.&T.C. ..... Top salt 725 ft.; drlg. 3,775 ft.

Lockhart & Co.'s No. 4 Hubbard, 1,660 ft. NE, 330 ft. NW, Sec. 33, Blk. 33, H.&T.C. ..... Shut down; 1,000 ft. oil in hole; total depth 4,236 ft.

LYNN COUNTY

Lubewell Oil Co.'s No. 1 May, 2,310 ft. S, 2,310 ft. W, Sec. 10, Blk. 7, E.L.R.R. ..... Shut down 190 ft. for casing.

George McCamey's No. 1 Edwards, 165 ft. N and E, Sec. 5, Blk. 2, L.S.&W. Sur. ..... Top salt 2,140 ft.; oil show 2,580-90 ft.; hole full sulphur water 4,730 ft.; set 6-in. casing 4,733 ft.; shut down 4,825 ft.

MENARD COUNTY

Cromwell & Duffey's No. 2 Winslow, 2,310 ft. S and E of NW cor. NE of NE Sec. 36, J. H. Gibson Sur. ..... Building rig

I. C. Barnett's No. 2 Callan, Sec. 1, 1,050 ft. from S, 1,190 ft. W ..... Est. 10 bls. show oil from 1,132-52 ft.; underreaming at 1,152 ft.

MITCHELL COUNTY

California Co.'s No. 8 Foster Lease 1, 1,100 ft. S and 990 ft. W NE cor. Sec. 6, Blk. 29, Twp. 1s, T.P. R.R. Sur. ..... Location.

Gibson & Johnson's No. 2 Scott, 150 ft. N and 2,490 ft. W of SE cor. Sec. 7, Blk. 19, Lavaca Navigation Co. ..... Spudded and shut down.

Morrison et al's No. 1 Morrison, Sec. 1, Blk. 29, Twp. 1n, 2,390 ft. from N, 660 ft. from E, T.&P.R.R. Sur. .... Location.

Seiger's No. 1 Scott, C of NE of SW, Sec. 36, Blk. 17, S.P.R.R. Sur. ..... Shut down 730 ft.

Teas & Wheeler's No. 1 Radford, 1,320 ft. N and W of Sec. 1, Blk. 27, T.&P. Sur. ..... Fishing 4,454 ft.

NOLAN COUNTY

Gibson & Johnson's No. 1 Bond, 1,320 ft. from N and 1,980 ft. from E of Sec. 42, Blk. 20, T.&P. ..... Drlg. 2,215 ft.

Phillips Pet. Co.'s No. 1 Plunkett, 330 ft. N and W of SE cor. NW, Sec. 66, Blk. 23, T.&P. Sur. ..... Drlg. 4,360 ft.

PECOS COUNTY

Anna Bell Oil Co.'s No. 1 Hollingsworth, 150 ft. N and W of C Sec. 24, Blk. 11, H.&G.N.R.R. Sur. ..... Moving in material.

E. W. Bateman's No. 1 Cunningham, 330 ft. from S and W line of NE Sec. 34, Blk. 11 ..... Underreaming 8-in casing at 852 ft.

Black & Dittman's No. 1 Pecos Valley, 160 ft. from SW and SE lines Sec. 34, Blk. 3, H.&T.C.R.R. Sur. ..... Location.

Buell & Hagan's No. 1 Byrne, 990 ft. from N and 2,310 ft. from E of Sec. 54, Blk. 10, H.&G.N.R.R. Sur. .... Location.

California Co.'s No. 3 Smith, Lease No. 5, Sec. 16, Blk. 194, 337 ft. from S and 166 ft. from E, G.C. &S.F. Sur. ..... Top pay 1,815 ft.; total depth 1,-832 ft.; top lime 1,828 ft.; shut down.

California Co.'s No. 6 Smith, Lease No. 1, 1,700 ft. N and 330 ft. W of SE cor. Sec. 37, Blk. 194, G.C. &S.F.R.R. Sur. ..... Derrick

California Co.'s No. 2 Tippett, 2,016 ft. from S and 1,040 ft. from E of Sec. 2, D.F. Robertson Sur. ..... Location.

Continental Oil Co.'s No. 2 University, 330 ft. S and 1,680 ft. E of NW cor. of Sec. 6, Blk. 17, University Land ..... Fishing 210 ft.

Continental Oil Co.'s No. 3 University, 330 ft. S and 2,371 ft. E of NW cor. Sec. 6, Blk. 17, University Land ..... Drlg. 565 ft.

Continental Oil Co.'s No. 6 University, 330 ft. S and 3,031 ft. E of NW cor. of Sec. 6, Blk. 17, University Land ..... Cellar.

Cornelius Bros. et al's No. 1 Cordova, 2,490 ft. from N and 1,515 ft. from W Sec. 29, Blk. 11, H.&G.N.R.R. Sur. ..... Drlg. 1,270 ft.

Crosby Prod. & Royalty's No. 3 Smith, 330 ft. from S and W line, Sec. 24, Blk. 194 ..... Building Road

Cosden Oil Co.'s No. 1 McDonald, 350 ft. from N and E of Sec. 1, H.E.&W.T. ..... Drlg. 275

Cranfill & Reynolds' No. 1 Masterson, SW cor. Sec. 104, Blk. 10 ..... Top pay at 1,249 ft.; second pay 1,268 ft.; shut down 1,440 ft.

Dixie Oil Co.'s No. 1 McKinzie, 3,300 ft. from N and 2,025 ft. from W of Sec. 15, Blk. 604, G.C.&S.F. ..... Moving in material.

Freeman et al's No. 1 Pecos Valley, 150 ft. from NW and SW of NE half of S Sec. 36, Blk. 3, H.&T.C. .... Location.

Harrison & Cromwell's No. 1 White-Baker, 2,310 ft. from S and E, Sec. 42, Blk. 11, H.&G.N.R.R. Sur. .... Shut down 848 ft. oil show 822-27 ft.

Humble Oil & Ref. Co.'s No. 1 Cunningham, C of SW Sec. 34, Blk. 11, H.&G.N.R.R. Sur. ..... Drlg. 740 ft.

Independent O. & G. Co.'s No. 1 Phelps, 150 ft. N and W of N half of NE Sec. 36, Blk. 11, H.&G.N.R.R. Sur. ..... Drlg. 165 ft.

J. L. Kennedy's No. 1 Roberts, C of Sec. 78, Blk. 3, T.&P.R.R. Sur. ..... Shut down 1,727 ft.

Sam Kitts et al's No. 1 Sherbino, 330 ft. from N and 990 ft. from W line, Sec. 52, Blk. C-4, G.C.&S.F.R.R... Top salt 976 ft.; shut down 2,482 ft.

Kirby Pet. Co.'s No. 1 Stockton Cattle Co., 330 ft. from N and E Sec. 2, T.C.R.R. Sur. ..... Location.

Landreth Prod. Co.'s No. 1-C University, 330 ft. from N and E, NW of SW of Sec. 31, Blk. 16 ..... Swabbing 30 bbls. 945-1,010 ft.

Landreth Prod. Co.'s No. 1-D University, 990 ft. from S and 990 ft. from W of Sec. 31, Blk. 16..... Show gas 962 ft.; show oil 969 ft.; top pay 1,682 ft.; total depth 1,695 ft.; plugging back.

Landreth & Dunning's No. 1 McDonald, 330 ft. N and E of SW cor. Sec. 40½, Blk. 12, H.&G.N.R.R. Sur. .... Cleaning out 1,465 ft.

Landreth Prod. & Henshaw Bros.' No. 1-E University, 330 ft. N and W of SE cor. W half NE Sec. 13, Blk. 18, University Land ..... Fishing 460 ft.

Landreth Prod. & Henshaw Bros.' No. 2-E University, 330 ft. S and E of NW cor. of W half of NE Sec. 13, Blk. 18, University Land ..... Cellar.

Landreth Prod. Corp. et al's No. 1-F University, 330 ft. from S and E of NE of SW Sec. 31, Blk. 16 ..... Shut down 940 ft.

Landreth Prod. Co.'s No. 2-F University, 2,310 ft. from S, 1,650 ft. W Sec. 31, Blk. 16 ..... Location.

Landreth & Henshaw's No. 1 University-G, 330 ft. N and E of SW cor. Sec. 31, Blk. 16, University Land... Total depth 997 ft.; top pay 968 ft.; swabbing 17½ bbls. 997 ft.

Landreth & Henshaw's No. 3 University-G, 330 ft. S and W of NE cor. of SE SW Sec. 31, Blk. 16 ..... Shut down 945 ft.; reaming 10-in. casing

Landreth Prod. Corp. et al's No. 1-I University, 330 ft. from S and W of NE of NE Sec. 24, Blk. 18 ..... Underreaming 475 ft.

Landreth Prod. and Henshaw Bros.' No. 2-I University, 330 ft. S and W of NE Sec. 24, Blk. 18, University Land ..... Cellar.

Landreth Prod. & World Oil Co.'s No. 5-B University, 330 ft. N and W of SE NE Sec. 13, Blk. 18, University Land ..... Shut down 1,631 ft. Top pay 1,608 ft.

Landreth Prod. & World Oil Co.'s No. 6-B University, 990 ft. S and W of NE cor. of Sec. 13, Blk. 18, University Land ..... S. D. 885 ft.

Mauch & Kroger's No. 1 Holmes, Sec. 5, Blk. 178, T.C. Sur. ..... Set 6⅝-in. casing 1,450 ft.

Mazda Oil Co.'s No. 1 Cordova Union Land Co., 2,310 ft. from N and 990 ft. from E of Sec. 103, Blk. 11, H.&G.N. ..... Spudded.

Merrick-Bristow's No. 1 Neville, 330 ft. from S and W, Sec. 42, Blk. 12, H.&G.N.R.R. Sur. ..... Top salt 645 ft.; shut down 1,670 ft.

R. E. Moore's No. 1 Arnold, 1,320 ft. from S and 660 ft. from E lines of Sec. 18, Blk. 1, H.&T.C.R.R. ..... Show oil 1,216 ft.; show oil 1,408 ft.; pulling 8-in. casing; total depth 1,408 ft.

Moncrief's No. 1 Clarkson, Sec. 54, Blk. 12, H.&T.N.R.R. Sur., 2,310 ft. from N and W..... Top salt 860 ft.; total depth 1,832 ft. 600 ft. oil

Moncrief's No. 1 Sullivan, 150 ft. E of C of SW Sec. 58, Blk. 11, H.&G.N.R.R. Sur. ..... Location.

George Morgan's No. 2 Toborg, Sec. 539, Blk. 1, 150 ft. S of Moncrief's No. 1 ..... Show oil 1,205 ft.; total depth 1,285 ft.; plugged back to 1,280 ft.; flowing 3 bbls. daily.

Mid-Kansas Oil & Gas Co.'s No. 32 Yates-A, 225 ft. N of most southerly N line and 1,308 ft. E of most western E line, Sec. 32, Blk. 194, I. G. Yates, Sur. A-8,195 ..... S. D. 1,400 ft.

H. T. O'dneal's No. 1 Power, 2,640 ft. from N and 150 ft. from W, Sec. 1, Blk. 132, T.&St.L.R.R. Sur. .... Shut down 40 ft.; running 10-in. casing.

J. D. O'Mara's No. 1 Bennett, Sec. 592, 1,460 ft. from S, 150 ft. from E, G.C.&S.F. ..... Fishing 875 ft.

J. D. O'Mara's No. 1 Streety, C of Sec. 1, W. P. Howard Sur. ..... Drlg. 900 ft.

Phillips Pet. Corp.'s No. 3 Pryor, 365 ft. from N and 440 ft. from W of Sec. 78, Blk. OW, T.M.R.R... Drlg. 1,090 ft.

Phillips Pet. Co.'s No. 4 Ramsey, 2,722 ft. from N and 1,980 ft. from E of Sec. 17. Blk. 194. G.C.&S.F. ..... Oil and gas 1,662-70 ft.; preparing to test 1,701 ft.

Rector Oil Co.'s No. 1 State Land, 330 ft. N and W of SE cor. Sec. 106, Blk. 3, H.&G.N.R.R. Sur. ..... Total depth 1,180 ft.; underreaming 8-in casing

M. M. Rowan's No. 1 University, NE Sec. 25, Blk. 16..... Moved rig off

Schumaker et al's No. 1 Williams et al, 330 ft. N of middle of S line, Sec. 1, Blk. 117, G.C.&S.F..... Drlg. 2,450 ft.

Shell Pet. Corp.'s No. 1 Owen et al. 220 ft. each way from E cor. Sec. 16, Blk. 5, H.&T.C..... Location.

Shell Pet. Corp.'s No. 1 Percival, 330 ft. from N and E of SE Sec. 199, Blk. 3, L&G.N. ..... Location.
Sides & Cloyd's No. 2 Blackstone & Slaughter, C NW of Sec. 34, Blk. A-2, T.&C.R.R. Sur. ..... Reaming 12-in casing shut down 355 ft.
Shell Pet. Corp.'s No. 2-C University Land, 330 ft. S and E of SW of NW Sec. 31, Blk. 16, University Land.... Show oil 1,352 ft.; top pay 1,639 ft.; shut down 1,647 ft.; flowed 169 bbls. first 24 hrs.; total depth 1,657 ft.; plugged back to 1,655 ft.; flowed 115 bbls. daily; swedging 6-in. casing 1,605 ft.
Shell Pet. Corp.'s No. 3-C University, 330 ft. N and W of SE of SW of NW Sec. 31, Blk. 16, University Land ..... 40,000,000 ft. gas 940-45 ft.; flowed 902 bbls. 1,620-24 ft.; had increase 1,640-43 ft.; drlg. 1,645 ft.
Skelly Oil Co.'s No. 1 University, 330 ft. from S and W of N half SE Sec. 31, Blk. 16 ..... Drlg. 675 ft.
Taylor-Link's No. 5 University, 990 ft. from N and 330 ft. from W of Sec. 30, Blk. 16 ..... 30,000,000 ft. gas; top pay 1,622 flowing 350 bbls. oil 1,625 ft.
Taylor-Link's No. 6 University, 330 ft. from N and 330 ft. from E of W half of SE, Sec. 13, Blk. 18 ..... S. D. 1,583 ft. reaming 6-in csg.
Taylor-Link Oil Co.'s No. 8 University, 330 ft. N and 2,310 ft. W of SE cor. Sec. 31, Blk. 16, University Land ..... Top pay 1,649 ft.; 1,400 ft oil in hole; total depth 1,675 ft.
Taylor-Link Oil Co.'s No. 9 University, 990 ft. N and 2,310 ft. W of SE Sec. 31, Blk. 16, University Land.. Drlg. 825 ft.
The Texas Co.'s No. 1 Graef, 4,758 ft. from W and 908 ft. from S of Sec. 44½, Blk. 12, H.&G.N. ..... Location.
Trees Oil Co.'s No. 3 Trees, 330 ft. from S and W of Sec. 90, Blk. 8, H.&G.N. ..... Moving in material.
World Oil Co.'s No. 1 University, 330 ft. from N and 2,310 ft. from E of Sec. 31, Blk. 16, University Land.. 6,000,000 ft. gas 1,630 ft.; total depth 1,665 ft.; top lime 1,630 ft.; 67 bbls. oil. 30° B. S.
World Oil Co.'s No. 2 University, Sec. 31, Blk. 16, 330 ft. from N, 2,310 ft. E ..... Location.
Zoch et al's No. 1 Cordova Union Land Co., C of SW Sec. 81, Blk. 11, H.&G.N. ..... Show oil 670-75 ft.; show gas 730-35 ft.; drlg. 900 ft.

PRESIDIO COUNTY

L. C. Brite's No. 4 Brite, 271 ft. from N, 1,183 ft. from E, Sec. 245, Blk. 4 ..... Shut down 670 ft.
Eastland Oil Co.'s No. 1 Tootle, C Sec. 17, Blk. 1, D.P. R.R. Sur. ..... Spudded; shut down.
T. P. Coal & Oil Co.'s No. 1 Bogel, 330 ft. S and W, Sec. 83, Blk. 8, G.H.&S.A. ..... Drlg. 2,903 ft.; gas show 2,810 ft.

REAGAN COUNTY

Big Lake Oil Co.'s No. 1-C University, 2,598 ft. S and 250 ft. W of NE cor., Sec. 1, Blk. 2, University Land.. Top pay 2,903 ft.; 1,000 ft. fluid in hole; top pay 6,807 ft.; drlg. 7,930 ft.
Big Lake Oil Co.'s No. 4-C University, 1,120 ft. from N and 1,096 ft. from E of Sec. 1, Blk. 2 ..... Showing oil and gas at 8,220 ft.; flowed 303 bbls. in 24 hrs.; total depth 9,220 ft.
Texon Oil & Land Co.'s No. 2-B University, 4,655 ft. from S, 250 ft. from W Sec. 36, Blk. 9 ..... Drlg. 1,470 ft.
Texon Oil & Land Co.'s No. 3-B University, 2,240 ft. from S, 920 ft. from W Sec. 36, Blk. 9 ..... Drlg. 915 ft.
Thomas & Brann et al's No. 1 Hughes, C NE of Sec. 7, Blk. 1, T.C.R.R. Sur. ..... Top salt 1,085 ft.; drlg. 1,150 ft.

REEVES COUNTY

Mac Best et al's No. 1 McKinney, 400 ft. from N line, 1,020 ft. from E line, Sec. 26, Blk. C-18 ..... Cleaning out 840 ft.
Exploration Co.'s No. 1 A. A. Kinney, 1,500 ft. W. of NE cor. Sec. 26, Blk. C-18, Public School Land, elev. 2,847 ft. ..... Shut down 2,990 ft.
H. T. Hansford's No. 1 Williams, 150 ft. from S and W, Sec. 17, Blk. 6, H.&G.N. ..... Spudded and shut down.
Black & Fink's No. 1 Brooks, 1,980 ft. N and 660 ft. W, Sec. 16, Blk. 59 ..... Shut down 500 ft.
Southern Crude O. P. Co.'s No. 1 Kloh-Rumsey, 2,310 ft. N and W SE cor., Sec. 23, Blk. 51 ..... Shut down 5,001 ft.
David R. Thompson's No. 1 A. A. Eddins, Sec. 9, Blk. C-1 ..... Drlg. by casing 5,490 ft.

RUNNELS COUNTY

Gibson & Johnson's No. 1 Johnson, 2,310 ft. N and 1,650 ft. W of SE cor., Sec. 150, E.T.R.R. Sur. ..... Spudding.
Gibson & Johnson's No. 2 Serratt, 2,310 ft. from S and 1,650 ft. from E of Sec. 150, E.T.R.R. Sur. ..... Spudding.
Gibson-Johnson's No. 1 Woods, Sec. 529, 2,600 ft. from S and 300 ft. from E, T. T. Williams Sur. ..... Drlg. 2,545 ft.
H. E. Lamar's No. 1 Long, 2,310 ft. N, 6,900 ft. E Sec. 262 ..... Shut down 1,375 ft.
McLean's No. 1 Clayton, 150 ft. from N line, 270 ft. from W line of Sec. 133 ..... Shut down 1,185 ft.
Summer et al's No. 1 Reese, 600 ft. S, 720 ft. W Sec. 26, SE cor. ..... Shut down 1,650 ft.
Vacuum Oil Co.'s No. 4 McMillan, 555 ft. S and 717 ft. W of NE cor., Lot 22, Domingo Diaz Sur., No. 532.. Location.

SCHLEICHER COUNTY

Fort McKavet's No. 1 Tisdale, Sec. 1,499, River Section, 3,630 ft. from S, 150 ft. from W ..... Set 6-in. casing 3,023 ft.; shut down 3,500 ft.
Interstate's No. 1 Whitten, 1,320 ft. from N and W, Sec. 35, Blk. LL, T.C.R.R. Sur. ..... Hole slopped over with oil at 4,925 ft.; made one good flow; set 6-in. casing 5,050 ft.; total depth 5,565 ft.
George Wilson's No. 1 Page, Sec. 40, Blk. L, 1,290 ft. from N, 1,470 ft. from W, G.H.&S.A.R.R. ..... Drlg. 485 ft.

SCURRY COUNTY

Byrd & Harmon's No. 1 Murphy, Jr., 330 ft. from N and E of Sec. 114, Blk. 97, H.&T.C. ..... Shut down 1,372 ft.
Camp Spring Oil & Ref. Co.'s No. 3 Guinn, 1,300 ft. from S, 300 ft. from E, Sec. 12, Blk. 3, H.&T.C.R.R. Sur ..... Swedging casing 2,680 ft.
Cottingham & Briscoe's No 1 Trees, C SE Sec. 147, Blk. 97 ..... Shut down 3,305 ft. reaming 8-in. casing
I. B. Mimms et al's No. 1 J. J. Koonsman' Sec. 216, Blk. 2, H.&T.C. Sur. ..... Spudded and shut down 300 ft.
G. E. Dickman and R. B. Pender et al's No. 1 F. C. Davis, 1,000 ft. N and 1,770 ft. W of SE cor. of Sec. 275, Blk. 3, H.&T.C. Sur. ..... Drlg. up lugs 4,065 ft.
E. L. Smith Oil Co.'s No. 1 Moore, 1,320 ft. from S and W Sec. 379, Blk. 97 ..... Rigging up.

STERLING COUNTY

Sherwood B. Owen's No. 1 Tweedle, 1,980 ft. from N and 1,320 ft. from E of Sec. 10, Blk. T. T.&P. ..... Drlg. 575 ft.

SUTTON COUNTY

Independent Oil & Gas Co.'s No. 1 Willson, Sec. 30, Blk. A, 1,650 ft. from N, 2,310 ft. from W ..... Rig complete
Independent & Sun Oil Co.'s No. 1 Allison, Sec. 39, Blk. A, 200 ft. from N and 1,000 ft. from W ..... Drlg. 3,548 ft.
Phillips Pet. Co.'s No. 1 A. G. Holman, 2,310 ft. S and 330 ft. W NE cor., Sec. 25, G.C.S.D.&N.G.R.R. Sur..... Fishing 6,635 ft.; making 1,500,000 ft. gas 6,635 ft.
L. G. Priest's No. 1 Allison, 1,320 ft. N and E of SW cor., Sec. 52, Blk. A, T.&P. Sur. ..... Show oil 3,625 ft.; increase at 3,690 ft.; total depth 4,020 ft., plugged back to 3,655 ft.; shot 30 qts. 3,627-55 ft.

TAYLOR COUNTY

Adams and others' No. 1 Lowe, 150 ft. from N and W of Sec. 19, League 120, Guadalupe Sur. ..... Drlg. 915 ft.
Condor Pet. Co.'s No. 1 Allen, C of NW Sec. 220, Blk. 64, H.T.C.R.R. Sur. ..... Location.
John B. Jameson's No. 1 Webb, 1,170 ft. S and W of NE cor. Sec. 46, Lunatic Asylum Land ..... Show oil 4,917 ft.; underreaming 5-inch casing, total depth 5,020 ft.

TERRELL COUNTY

Big Bend Oil Co.'s No. 1 Bassett, C NW Sec. 155, Blk. D, M.K.&T.R.R. Sur. ..... Shut down 1,150 ft.
Keck Pecos Trust Co.'s No. 1 Hamilton, C Sec. 6, Georgetown Ry. Sur. ..... Shut down 2,915 ft.
Mrs. J. B. McPhee's No. 1 Sam Belt, C Sec. 78, Blk. D-7, E.L.R.R. Sur. ..... Shut down 880 ft.
Milham Exploration Co.'s No. 1 Bassett, Sec. 76, Blk. Y, W. E. Robertson Sur. ..... Running 5-in. casing 5,400 ft.
Transcontinental Oil Co.'s No. 1 Goode, 2,152 ft. from E and 330 ft. from S Sec. 26, Blk. 141, G.C.&S.F.R.R.... Material.
Woodley & Jones' No. 1 Pankenham, C SE NW Sec. 43, Blk. B-2, C.C.S.D.&N.G.R.R. Sur. ..... Shut down 625 ft.

TERRY COUNTY

Kingsland, O. P. Co.'s No. 1 Brownfield, C NW SW SW Sec. 7, Blk. 1-A, E.L.R.R. Sur. ..... Fishing bailer 5,050 ft.

TOM GREEN COUNTY

Cannon et al's No. 1 Rust, 990 ft. S, 990 ft. W of NE cor. of Sec. 745 ..... Rig.
Fitzgerald & Tallaferro's No. 1 Bennett, C SW Sec. 1,625, E. H. Ringer ..... Shut down 2,430 ft.
Fuhrman Pet. Co.'s No. 1 Wardlaw, 2,650 ft. from N and E of Sec. 6, Blk. 17, H.&T.C. ..... Shut down 635 ft.

UPTON COUNTY

Gulf Prod. Co.'s No. 3-B Hughes, 160 ft. N and 161 ft. W of most southerly SE cor. of their 200-acre lease "B" out of Wm. Teen Sur. ..... Location.
Pure Oil Co.'s No. 3 Hughes, 150 ft. S and 767 ft. E of NW of their 300-ac., Sec. 4, Wm. Teer Sur. ..... Drlg. 610 ft.
Texas Pacific C. & O. Co.'s No. 14-A Lane, 990 ft. N and 2,310 ft. W SE cor. Sec. 5, G.C.&S.F. ..... Location.
Texon-Continental's No. 2 Sherk, 430 ft. from N line, 330 ft. from W line, Sec. 35, Blk. 1 ..... Location.
T. P. Coal & Oil Co.'s No. 1-D Lane, 430 ft. from S, 330 ft. W Sec. 36, Blk. 1 ..... Location.
T. & P. Coal & Oil Co.'s No. 1 Reese, 330 ft. from N and E line, Sec. 2, Blk. 3 ..... Location.

VAL VERDE COUNTY

Independent Operators' No. 1 Whitehead, SE SE Sec. 30, Blk. 4, L.&G.N. Sur., elev. 1,175 ft. ..... Shut down 4,850 ft.
O. O. Owens, No. 1 Mills, Sec. 128, Blk. 1, L.&G.N. Sur., elev. 2,130 ft. ..... Gas sand 2,491-2,520 ft.; tested 125,700 ft. gas; reset 8-in. 2,511 ft.; reaming; drlg. 4,915 ft.
Phantom Oil Co.'s No. 1 Ingram, 175 ft. W of E line and 300 ft. N of S line Sec. 44, Blk. D-8, E.L.&R.R. Sur... Shut down 1,185 ft.
Valvert Oil Corp.'s No. 1 Bassett, C NE, Sec. 47, Blk. Y.. Set 15½-in. casing 767 ft.; set 10-in. casing 1,510 ft.; shut down 4,009 ft.

WARD COUNTY

Atlantic et al's No. 1 Dorr, 1,730 ft. S, 990 ft. W, Sec. 2, J. Howe ..... Drlg. 155 ft.
Atlantic Oil and Delmar Oil Co.'s No. 4 Hayzlett, 2,490 ft. SE NW and 1,470 ft. NE of SW line Sec. 17, Blk. 5, H.&T.C.R.R. Sur. ..... Shut down 2,500 ft.; top pay 2,455 ft.; shot twice; flowed 70 bbls. oil after shots.
Atlantic Oil and Delmar Oil Co.'s No. 5 Hayzlett, 2,420 ft. SW of NE line, 2,050 ft. NW SE of Sec. 17, Blk. 5, H.&T.C.R.R. ..... Top salt 755 ft.; shot 220 quarts 2,462-2,502 ft.; cleaning out.
Atlantic & Delmar's No. 6 Hayzlett, 2,490 ft. from NE and NW lines Sec. 17, Blk. 5, H.&T.C. ..... Location.
Gulf Prod. Co.'s No. 2 Hutchins, 330 ft. N and E, Sec. 7, Blk. O ..... Top salt 1,240 ft.; top pay 2,529 ft.; total depth 3,012 ft., lime shells and sand; flowed 190 bbls. daily.
Gulf Prod. Co.'s No. 3 Hutchins, 2,310 ft. from N and 330 ft. from W Sec. 1, Blk. F, G.M.M.B.&A. Sur. .... Location.
Gulf Prod. Co.'s No. 8 Hutchings, 330 ft. N and E of SW cor. of NW Sec. 1, Blk. F, G.M.M.&A. Sur. ..... Location.
Gulf Prod. Co.'s No. 7 O'Brien, 330 ft. S and W Sec. 22, Blk. F, G.M.M.B.&A. Sur. ..... Drlg. 2,530 ft.
Gulf Prod. Co.'s No. 3 Wristen Bros., 220 ft. NE of SW and 220 ft. SE of NW Sec. 18, Blk. 5, H.&T.C. ..... Show gas 1,960-70 ft.; filling up with sulphur water 2,520-27 ft.; shut down 1,000 ft. salt water at 2,545 ft.
L. C. Harrison et al's No. 1 Wristen, 990 ft. from S and W lines of Sec. 26, Blk. B-28 ..... Top salt 700 ft.; total depth 2,390 ft.
E. B. Lovelace et al's No. 1 Redman, 1,980 ft. NE of SW line and 1,980 ft. SE of NW line, Sec. 162, Blk. 34, H.&T.C.R.R. ..... Underreaming 10-in. casing total depth 1,280 ft.
Penn & Atlantic's No. 2 Bennett, 2,310 ft. S line, 1,650 ft. W line, Sec. 16, Blk. 34, H.&T.C.R.R. Sur. ..... Machine.
Penn & Atlantic's No. 1 Cooper, 330 ft. from NE and 990 ft. from NW of Sec. 43, Blk. 34, H.&T.C... Cellar.
Shipley's No. 3 Hayzlett, 2,490 ft. S, 1,470 ft. W Sec. 17, Blk. 5 ..... Top salt 725 ft.; 2 bbls. oil 2,489-2,500 ft. sandy lime; shut down 2,500 ft.; cleaning out
Shipley et al's No. 4 Hayzlett, 2,050 ft. NW of SE and 2,420 ft. NE of SW line of Sec. 17, Blk. 5, H.&T.C. R.R. Sur. ..... Top salt 720 ft.; shut down 2,546 ft.; plugged back 2,538 ft.
Shipley et al's No. 5 Hayzlett, assume common line Secs. 16 and 17 is N and S 220 ft. S and 1,910 ft. W Sec. 17, Blk. 5 ..... Plugged back from 2,546 ft. to 2,538 ft.; shot 90 qts. 2,473-93 ft.; no results.
Shipley et al's No. 1 Monroe, 330 ft. SE SW, Sec. 3, Blk. 1 ..... Shut down 605 ft.
Sun Oil Co.'s No. 1 Sealy, 330 ft. from N and E of Sec. 88, Blk. F, G.M.M.B.&A. Sur. ..... Rig.
Sun Oil Co.'s No. 2 Sealy, 2,310 ft. from N and 330 ft. from W of Sec. 52, Blk. F, G.M.M.B.&A. Sur. ..... Rig.

WINKLER COUNTY

V. T. Bolin's No. 2 Brown et al, 2,000 ft. S and W of NE, Sec. 4, Blk. B-5, Public School Land ..... Top salt 1,300 ft.; shut down 2,832 ft.
Bashara et al's No. 2 Bashara, 990 ft. from S, 2,310 ft. from E, Sec. 17, Blk B-3, Public School Land ..... Rigging up
Cinderella Syndicate's No. 1 Hendricks, 330 ft. N, 1,650 ft. W Sec. 42, Blk. 26, Public School Land.... Total depth 150 ft.; building rig.
Humble O. & R. Co.'s No. 1-D Hendricks, 330 ft. from S, 2,310 ft. from W of Sec. 41, Blk. 26 ..... Top lime 2,770 ft.; drlg. 2,859 ft.; top pay 2,812 ft.
Humble Oil & Ref. Co.'s No. 2 Walton, 2,310 ft. from N and W of Sec. 47, Blk. 26 ..... Spudding
Liner Drlg. Co.'s No. 1 Campbell, 330 ft. from N and E cor., Sec. 2, Blk. B-5 ..... Top brown lime 2,510 ft.; Drlg. 3,194 ft.
Southern Crude O. P. Co.'s No. 4 Hendricks T-90, 2,310 ft. S and E of Sec. 47, Blk. 26 ..... Top lime 2,242 ft.; top pay 2,310-17 ft.; 18,000,000 ft. gas 2,401-04 ft.; mixing mud to kill gas; estimated 25,000,000 ft. gas; oil show 2,575-78 ft.; total depth 3,005 ft.; cleaning out

WILDCAT OPERATIONS IN TEXAS PANHANDLE

(Continued from Page 70)

Southland Oil Co.'s No. 1 Lewis, C SE 40 ac., Sec. 3, Blk. 29, H.&G.N.R.R. Sur. ..... S.D. 2,570 ft.

GRAY COUNTY

Adams Oil Co.'s No. 4 Morse, 330 ft. S and W, NE cor. Sec. 3, Blk. 26, H.&G.N.R.R. Sur. ..... S.D. 2,440 ft.

Alexander and Shell Pet. Corp.'s No. 1 Harrah-McKinney, 330 ft. S and W, NE cor. E½ SE, Sec. 163, Blk. 3, I.&G.N.R.R. Sur. ..... Cmtd. 8¼-in. csg; T.D. 2,550 ft.

British-American Oil Co.'s No. 2 Purviance, 330 ft. N and E, SW cor. E 160 ac., Sec. 61, Blk. B-2, H.& G.N.R.R. Sur. ..... Location.

Champlin Ref. and Danciger's No. 3 Cook-Faulkner, 330 ft. S and E, NW cor. W 120 ac. of E 200 ac., Sec. 30, Blk. B-2, H.&G.N.R.R. Sur. ..... Rigging up.

Clayton-Key Oil Co.'s No. 1 Key, 330 ft. from S and W of E 42 ac. of N 84 ac. of S 168 ac., Sec. 1, B.&B. Sur. ..... Rigging up.

Constantine et als' No. 1 Crews, 330 ft. S and W, NE cor. SW, Sec. 20, Blk. 30, H.&G.N.R.R. Sur. ..... S.D. 1,810 ft.

Danciger et als' No. 11 Jackson, 330 ft. S, 1,320 ft. W, NE cor. NW, Sec. 88, Blk. B-2, H.&G.N. Sur. ..... T.D. 2,906 ft.

Danciger O. & R. Co.'s No. 1 McLarty, 1,220 ft. from S, 330 ft. from W, W½ NW, Sec. 10, Blk. 1, A.C. H.&B. Sur. ..... 12,000,000 ft. gas 2,275-2,350 ft; 50,000,000 ft. gas 2,275-2,490 ft; 18,000,000 ft. gas 2,500-2,620 ft; drlg 3,275 ft; 18,000,000 ft. gas; to P.B.

Danciger O. & R. Co.'s No. 5 Morse, 330 ft. N and E, SW SW NW, Sec. 1, Blk. 26, H.&G.N.R.R. Sur. ..... Drlg. 1,105 ft.

Danciger O. & R. Co.'s No. 1 Shaw, 330 ft. from S, 286 ft. from E of E 39½ ac., NW, Sec. 5, Blk. 1, A.C.H.&B. Sur. ..... T.D. 2,588 ft.

Danciger O. & R. Co.'s No. 1 Williams, 330 ft. from N, 330 ft. from E, S½ NW ..... Estimated 15,000,000 ft. gas 2,610-70 ft; S.D. 2,720 ft.

Dunlop's No. 4 Morse, 330 ft. N and E SW cor. SW, Sec. 17, Blk. A-9, H.&G.N.R.R. Sur. ..... T.D. 2,431 ft; cmtd. 8¼-in. csg.

Sines & Reiger's (formerly Eslick et als') No. 1 Mrs. J. A. Hopkins, NW cor. W 80 ac. of SW, Sec. 84, Blk. B-2, H.&T.C. Sur. ..... S.D. 3,206 ft.

Gardner Bros. and Collins' No. 2 Saunders, 965 ft. from S, 330 ft. from E of W 68 ac. E½, J. G. Eustice Sur. .. Location.

Gulf Prod. Co.'s No. 1 Barrett, 967 f.. N and E, SW cor. NE, Sec. 131, Blk. 3, I.&G.N.R.R. Sur. ..... Location.

Gulf Prod. Co.'s No. 3 Worley-A, 330 ft. N, 1,650 ft. W, SE SW, Sec. 36, Blk. 3, I.&G.N.R.R. Sur. ..... Temp. abd. at 3,163 ft.

Gulf Prod. Co.'s No. 3 Saunders, 330 ft. S, 990 ft. E, NW cor. its 130-ac. lease out of SW cor., Sec. 40, Blk. 3, I.&G.N.R.R. Sur. ..... Drlg. 1,524 ft.

Guernsey Oil Co.'s No. 1 Pope, 330 ft. from N and W lines, W½ SW, Sec. 173, Blk. 3, I.&G.N. Sur. ..... Drlg. 3,150 ft.; 4,000,000 ft. gas from 2,985-3,070 ft.

Guernsey Oil Co.'s No. 1 Vaniman, 330 ft. N and W, E½ NE, Sec. 175, Blk. 3, I.&G.N.R.R. Sur. ..... S.D. 1,105 ft.

Haymer O. & G. Co.'s No. 1 Morse, 330 ft. each way out of SE cor. E½ SE, Sec. 45, Blk. A-9, H.&G. N. Sur. ..... S.D. 375 ft.

Herragan Oil Co.'s No. 1 Bradford, 330 ft. from N, 990 ft. from E. Sec. 123, Blk. B-2 ..... First S.G. 2,475-80 ft; 15,000,000 ft. gas 2,515-40 ft.; S.D. 3,140 ft.; S.O. 2,932-50 ft.

Hinerman Bros.' No. 1-A Taylor, 330 ft. from NE E½ NE, Sec. 8, Blk. H, A. H. Wallace Sur. ..... S.D. 2,950 ft; set 8¼-in. csg. 2,933 ft.

Humble O. & R. Co.'s No. 1 Chapman, 330 ft. from N and E, NW, Sec. 69, Blk. 25, H.&G.N. Sur. ..... 12,000,000 ft. gas 2,680 ft.; drlg. 2,890 ft.

Humble O. & R. Co.'s No. 4 Jackson, 976 ft. N, 330 ft. E, SW cor. E 95.25 ac., Sec. 90, Blk. B-2, H.&G.N. Sur. .. S.G. 2,271 ft; drlg. 3,020 ft; flowed 180 bbls; T.P. 2,882-90 ft; C.O.

Humble O. & R. Co.'s No. 1 Palmer, 330 ft. from N and E lines, of W 100 ac., Sec. 31, Blk. B-2, H.&G. N. Sur. ..... S.D. 3,120 ft; to pump.

Lyon et als' No. 1-A Morse, 330 ft. from S and W, NW NW, Sec. 1, Blk. 26, H.&G.N.R.R. Sur. ..... Rig.

Magnolia Pet. Co.'s No. 7 Bowers, 990 ft. S and E, NW cor. NW, Sec. 63, Blk. B-2, H.&G.N.R.R. Sur. ..... S.D. 2,968 ft; T.P. 2,855 ft; I.P. 150 bbls. first 24 hrs.

Magnolia Pet. Co.'s No. 8 Bowers, 990 ft. N and E, SW NW, Sec. 63, Blk. B-2, H.&G.N.R.R. Sur. ..... S.D. 3,000 ft.

Magnolia Pet. Co.'s No. 4 Magnolia, 990 ft. S and 330 ft. W, NE cor. NE, Sec. 11, Blk. 3, I.&G.N.R.R. Sur. .. Drlg. 2,540 ft.

Magnolia Pet. Co.'s No. 1 Wright, 330 ft. S and W lines, S½ SW, Sec. 13, Blk. 3, I.&G.N. Sur. ..... 15,000,000 ft. gas 2,707-10 ft; S.D. 2,710 ft.

McAuley et als' No. 3 Morse, 330 ft. S and E, NW cor. S½ NE, Sec. 2, Blk. 26, H.&G.N.R.R. Sur. ..... Rig.

Oil Operators' No. 1 Bowers, 330 ft. from N, 330 ft. E, Sec. 93, Blk. B-2, H.&G.N. Sur. ..... Show oil and gas 2,400-17 ft; S.D. 3,090 ft; S.O. 3,036-55 ft; first gas 2,483 ft; increased at 2,500 ft., 2,544 ft. and 2,950 ft.

Operators Oil Co.'s No. 1 Lovett, 330 ft. from N and W lines, W½ NE, Sec. 57, Blk. B-2, H.&G.N. Sur. .. Gas 2,390 ft; S.O. 2,837-47 ft; T. D. 3,061 ft; P.B. 2,880 ft.; shot 280 qts. from 2,830-80 ft.; swabbed 17 bbls. in 3 hrs.; to pump.

Operators Oil Co.'s No. 5 Cook-Faulkner, 990 ft. N, 330 ft. W, SE W 90 ac., Sec. 30, Blk. B-2, H.&G.N. Sur. .. S.D. 2,748 ft.

Operators Oil Co.'s No. 6 Cook-Faulkner, 330 ft. S and E, NW cor., Sec. 30, Blk. B-2, H.&G.N.R.R. Sur. .... S.G. 2,424 ft. and 2,477 ft; S.D. 2,750 ft.

Operators Oil Co.'s No. 7 Cook-Faulkner, 330 ft. S, 320 ft. E. NW cor., Sec. 30, Blk. B-2, H.&G.N. Sur. ..... S.G. 2,380 ft; S.D. 2,691 ft.

Phillips Pet. Co.'s No. 6 Jackson, 330 ft. from N, 990 ft. from E, line, S½ NE, Sec. 88, Blk. B-2, H.&G. N.R.R. Sur. ..... T.D. 3,030 ft.

Phillips Pet. Co.'s No. 6 Palmer, 330 ft. S and W, NE cor., Sec. 31, Blk. 2, H.&G.N.R.R. Sur. ..... S.D. 2,743 ft.

Plains Drlg. Co.'s No. 1-A Chapman, 330 ft. from S and W, NE, Sec. 10, Blk. 26, H.&G.N. Sur. ..... S.G. 2,240 ft; 15,000,000 ft. gas 2,240-90 ft.; S.D. 2,742 ft.; 300 f.. oil in hole; shot 230 qts. from 2,580-2,740 ft; C.O.

Queen Oil Co.'s No. 1 Lovett, 330 ft. N and W, W½ NE, Sec. 35, Blk. B-2, H.&G.N.R.R. Sur. ..... Rig.

Quillian et als' No. 1 Barrett, 330 ft. from N, 330 ft. from E, Sec. 131, Blk. 3, H.&G.N. Sur. ..... 20,000,000 ft. gas 2,660-2,705 ft; drlg 2,975 ft.

Ray et als' No. 1 Noble, 240 ft. from S and 330 ft. from W line, W 80 ac., SW, Sec. 10, Blk. A-6, H. &G.N. Sur. ..... Drlg. 2,500 ft.

Rieger & Steckoll's No. 1 Bohr, 330 ft. from S and E, Sec. 37, Blk. B-3, H.&G.N. Sur. ..... Drlg. 805 ft.

Robertson & Devore's No. 1 Saunders, 330 ft. from S and W, E½ NW, Sec. 40, Blk. 3, H.&G.N.R.R. Sur. .. Rig.

Shamrock O. & G. Co.'s No. 3 Saunders, 330 ft. N and E, SW E½ SE, Sec. 4, Blk. 1, A.C.H.&B. Sur. ..... S.D. 2,438 ft.

Shamrock O. & G. Co.'s No. 1 Taylor, 330 ft. each way out of NE cor. NW, Sec. 1, Blk 2, H.&G.N. Sur. .... Fishing 1,490 ft.

St. Clair Oil Co.'s No. 1 Dial, 330 ft. S and W, NE cor. SE. Sec. 10, Blk. 25, H.&G.N.R.R. Sur. ..... Spudded and S.D.

St. Clair Oil Co.'s No. 1 L. S. Stockton, SE cor., Sec. 35, W. R. Lee Sur. ..... Spudded and S.D.

Stogner Meaders' No. 1 Taylor, 330 ft. from S and E, SW, Sec. 7, Blk. H, A. H. Wallace Sur. ..... 1,000,000 ft. gas 2,490-2,535 ft; 2,000,000 ft. gas; T.P. 2,490 ft; drlg. 2,800 ft.

The Texas Co.'s No. 3-B Chapman, 330 ft. S and E, NW cor. SE, Sec. 69, Blk. 25, H.&G.N.R.R. Sur. .... 4,000,000 ft. gas 2,140-50 ft; T.D. 2,655 ft.

The Texas Co.'s No. 3 Combs-Worley, 330 ft. N and W, SE cor., Sec. 26, Blk. 3, I.&G.N. Sur. ..... 4,000,000 ft. gas 2,135-40 ft; S.D. 2,710 ft.

The Texas Co.'s No. 3 McLarty-B, 1,326 ft. S, 660 ft. E, NW E½, Sec. 10, Blk. 1, A.C.H.&B. Sur. ..... 4,000,000 ft. gas 2,135-40 ft.; S.D. 2,920 ft.

The Texas Co.'s No. 14 Saunders, 955 ft. N, 330 ft. W, SE cor. W½, J. G. Eustis Sur. ..... S.D. 2,510 ft.

The Texas Co.'s No. 15 Saunders, 330 ft. N and W, SE cor. W½ SE, Sec. 4, Blk. 1, A.C.H.&B. Sur. .... S.D. 2,600 ft.

Travis & Rieger's No. 1 Mackie, 330 ft. from N and E, Sec. 114, Blk. B-2, H.&G.N.R.R. Sur. ..... Drlg. 2,273 ft.

Triplehorn Oil Co.'s No. 1 Morse, 330 ft. from S and W, SW SE, Sec. 17, Blk. A-9, H.&G.N.R.R. Sur. ..... Location.

White Eagle O. & R. Co.'s No. 3 Faulkner, 1,158 ft. N, 330 ft. E, SW cor. E 80 ac., Sec. 29, Blk. B-2, H. &G.N.R.R. Sur. ..... Location.

Wright Wilson, trustee's No. 1 Chapman, 175 ft. from S and E lines, N½ NW, Sec. 69, Blk. 25, H.&G.N. Sur. S.D. with S.O. 2,685 ft.

Wilcox-Pampa Oil Co.'s No. 10 Combs-Worley, 330 ft. S and W, NE cor. SW SW, Sec. 35, Blk. 3, I.&G. N.R.R. Sur. ..... Drlg. 2,255 ft.

HOCKLEY COUNTY

World Oil Co.'s No. 1 Ellwood, 320 ft. from N and W lines, League 7, Wilbarger County School lands; elevation 3,363 ft; contract depth 5,000 ft. ..... S.D. 3,250 ft.

HUTCHINSON COUNTY

Alamosa Oil Co.'s No. 4 Sanford, 310 ft. S, 320 ft. W, NE cor. N 160 ac., S 240 ac., Sec. 85, Blk. 46, H.& T.C. Sur. ..... S.O. and wtr. 3,010-11 ft; S.D. 3,095 ft.

Continental Oil Co.'s No. 1-B Johnson, 330 ft. S and W, NE cor. NW, Sec. 6, Blk. 1, B.&B. Sur. ..... 10,000,000 ft. gas; 1,000 ft. oil in hole 3,088 ft.; S.D. 3,178 ft.; T. P. 3,175 ft.; I.P. 285 bbls. oil, 85 bbls. water on swab.

Danciger O. & R. Co.'s No. 3 Moore, 330 ft. S and E, NW W½ SE, Sec. 125, Blk. 4, I.&G.N.R.R. Sur. .... Drlg. 2,210 ft.

Huey et als' No. 3 Smith et al, 330 ft. from N, 660 ft. from W, S 40 ac. of E 100 ac., SE, Sec. 12, Blk. Y.. Fishing 2,702 ft.

Midwest Explin. Co.'s No. 3 Moore, 330 ft. N, 330 ft. W, SE NE, Sec. 125, Blk. 4, I.&G.N.R.R. Sur. ..... Spudding.

Oates & Jones, No. 1 Jasper, 450 ft. S, 330 ft. W, NE 121-ac. tract, Sec. 23, Blk. M-23, T.C.R.R. Sur. ..... Spudding.

O. B. Penney's No. 2 Johnson Bros., 330 ft. from S line, 330 ft. from W line, W½ NE, Sec. 35, Blk. Y, A.&B. Sur. ..... 31,000,000 ft. gas 1,990 ft; S.D. 3,060 ft; S.O. 3,040-45 ft; I.P. 60 bbls.

Phillips Pet. Co.'s No. 6 (Florence), 330 ft. each way from S and W lines, E½ ..... T.D. 2,876 ft; T.P. 2,805 ft; I.P. 70 bbls; shot 54 qts 2,788-2,828 ft; C.O. 2,876 ft.

Reliance O. & G. Co.'s No. 2 Sanford, 330 ft. S and E, NW W½ of N 80 ac. of S 320 ac., Sec. 33, Blk. 46, H.&T.C. Sur. ..... Drlg. 2,520 ft.

Skelly Oil Co.'s No. 2 Lee Bivins, 306 ft. from E, 1,342 ft. from S line, S 160 ac. of N 320 ac., Sec. 84, Blk. 46, H.&T.C.R.R. Sur. ..... S.D. 3,015 ft.; T.P. 3,010 ft.; 400 f.. oil in hole.

Smith & McDaniel's No. 1 Pitcher, 330 ft. from S and E, Sec. 19, Blk. M-21, T.C.R.R. Sur. ..... Rigging up.

The Texas Co.'s No. 3 Moore, 330 ft. S, 1,338 ft. E, NW cor. SW, Sec. 125, Blk. 4, I.&G.N.R.R. Sur. .... Drlg 2,420 ft.

The Texas Co.'s No. 4 J. L. Moore, 330 ft. S and W, NE cor. SW, Sec. 125, Blk. 4, I.&G.N.R.R. Sur. ..... Drlg. 235 ft.

Travelers Oil Co.'s No. 2 Cockrell, 350 ft. from E and S lines, Sec. 8, Blk. B-3, D.&S.E. Sur. ..... 1,000,000 ft. gas 2,610-2,770 ft; T. D. 3,039 ft; T.P. 3,010-39 ft; averaging 60 bbls. daily; shot 120 qts. from 3,010-39 ft; C.O.

LAMB COUNTY

Graham O. & G. Co. et als' No. 1 Ellwood, CWL, Sec. 9, Blk. T, T. A. Thompson Sur. ..... S.D. 3,635 ft.

LIPSCOMB COUNTY

Brown et als' No. 1 Box T Ranch, SW NE, Sec. 612, H.&T.C. Sur. ..... Underreaming 6⅝-in. csg.; T.D. 3,625 ft

Okla. Public Service Co.'s No. 1 C. W. Jones, NE SW, Sec. 100, H.&T.C. Sur. ..... S.D. 4,790 ft.

LUBBOCK COUNTY

Center Oil Co.'s No. 1 Bowles Ranch ..... Small S.O. 1,133-40 ft; fishing 4,167 ft.

MOORE COUNTY

Amarillo Oil Co.'s No. 1 Perkins-A, 330 ft. each way out of NW cor. NE, Sec. 76, Blk. 3 ..... S.D. 3,515 ft.

Canadian River Gas Co.'s No. 1-C Sneed, 660 ft. from N and E, SW, Sec. 46, Blk. 6-T, T.&N.O.R.R. Sur. .. Rigging up.

Dana O. & G. Co.'s No. 1 Anthony, C NW, Sec. 260, Blk. 44, H.&T.C.R.R. Sur. ..... Drlg. 3,100 ft.

Fritch O. & G. Co.'s No. 1 Lee Bivins, C N 40 ac. of N 160 ac., Sec. 4, Geo. Mahan Sur. ..... 2,000,000 ft. gas 1,550-65 ft; S.D. 2,225 ft.

Red River Gas Co.'s No. 1 J. M. Shelton, 330 ft. each way from SE cor., Sec. 52, Blk. 3, G.&M. Sur. ..... Drlg. 1,950 ft.

MOTLEY COUNTY

Explin. Co.'s No. 5 Matador, C, Sec. 45, Blk. J-B, C, B.&C.N.G.R.R. Sur. ..... S.D. 3,780 ft.

Explin. Co.'s No. 6 Matador, 330 ft. from N line, 330 ft. from E line, Sec. 132, Blk. M ..... U.R. 6-in. csg. 3,750 ft.

Matador Oil Corp.'s No. 1 Owens, C NE, Sec. 10, Blk. G, B.&B. Sur. ..... S.D. 580 ft.

POTTER COUNTY

Canadian River Gas Co.'s No. 1 Allison "A," 386 ft. from E line, 5,439 ft. from S line, Sec. 1, W. T. Palmer Sur.. Set 8-in. csg. 2,072 ft.

RANDALL COUNTY

W. A. Patterson's No. 1 Palo Duro, Sec. 60, Blk. K-14 .. S.D. 1,250 ft.

ROBERTS COUNTY

Big Bend Oil Co.'s No. 1 Ledrick, Sec. 7, Blk. A-5 ..... T.D. 5,992 ft; shot 10 qts. 5,270-93 ft; S.O. 5,288 ft; C.O.

WHEELER COUNTY

Lela O. & G. Co.'s No. 1 Williams & Laycock, 330 ft. from S, 209 ft. from W, W½ NW, Sec. 20, Blk. A-8, H.&G.N. Sur. ..... Fishing 1,755 ft.

Lone Star Gas Co.'s No. 1 Simms, C SW NE, Sec. 103, Blk. 23, H.&G.N.R.R. Sur. ..... Rig.

Magnolia Pet. Co.'s No. 2 Laycock, 680 ft. N, 700 ft. E, SW cor. S½ SW, Sec. 10, Blk. 27, H.&G.N.R.R. Sur.. T.D. 1,400 ft.; running 10-in. csg.

Martin & Debous' No. 2 Close, C NE NE, Sec. 83, Blk. 23, H.&G.N.R.R. Sur. ..... Location.

Upham Gas Co.'s No. 5 Close-Gooch, 30 ft. N, 660 ft. E, SW cor. SW NW, Sec. 81, Blk. 23, H.&G.N.R. R. Sur. ..... Location.

Upham's No. 1 Cuddleback, C SE SE, Sec. 2, Blk. 24, H.&G.N.R.R. Sur. ..... Rigging up.

Vaughn et als' No. 3 Ackley, 330 ft. from N, 330 ft. from W, Sec. 4, Blk. 27, H.&G.N. Sur. ..... T.D. 1,840 ft; 5,000,000 ft. gas 1,660-1,770 ft; junked hole; skidding rig.

Wischkamper et als' No. 1 Curry, C NE SE, Sec. 53, Blk. 23, H.&G.N. Sur. ..... 10,000,000 ft. gas 1,750-90 ft.; S.D. 1,850 ft; T.P. 1,790-1,805 ft.

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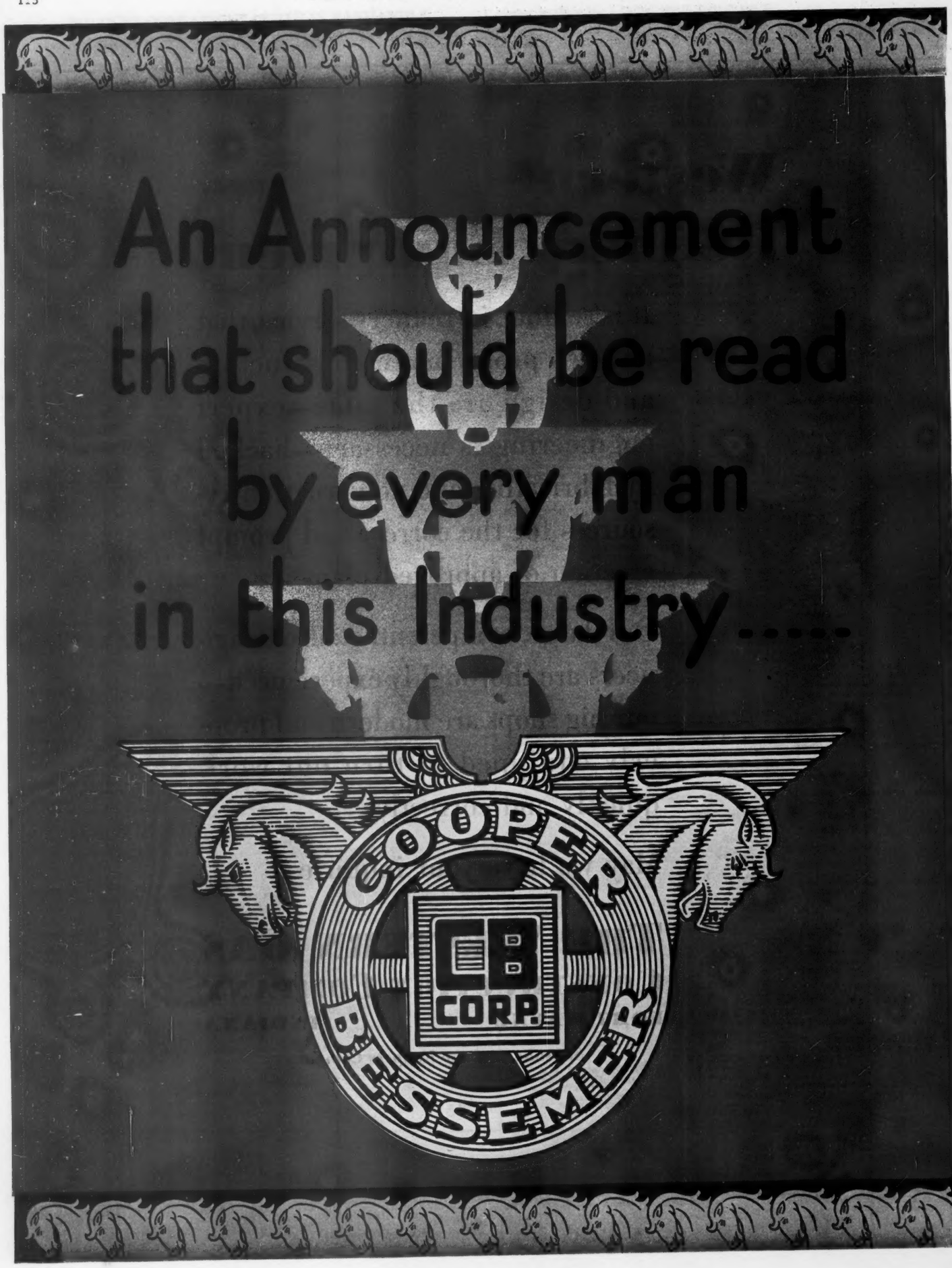
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And, in the 31 years that Bessemer engines and power machinery have been built at Grove City, the name "Bessemer" has meant—*Finest equipment of ITS type.*

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WILDCAT OPERATIONS IN OKLAHOMA

(Descriptions are East and North unless marked otherwise)

(Continued from Page 56)

GRANT COUNTY

Gypsy Oil Co.'s No. 1 Belderbeck, C SE SE Sec. 27-28-7w. Drlg. 4,010 ft.
Bailey's No. 1 Stover, C SW SE Sec. 20-27-5w .....Rig on ground.
Baucher et al's No. 1 Deadman, SW SE Sec. 12-28-4w..Drlg. 3,982 ft.
Cowden and others' No. 2 Vollmer, CEL NE SW Sec. 22-25-4w .....Shut down 5,640 ft.
Otstot's No. 1 Tabor, C NE NE SE Sec. 23-26-3w .....Drlg. 1,300 ft.

GREER COUNTY

Helmerich & Payne's No. 1 Henck, NW cor. Sec. 23-6-24w.Drlg. 2,170 ft.
I. T. I. O. and others' No. 1 fee, C SW NE Sec. 17-6-24w .....Straightreaming 1,902 ft.
S. M. Stauffer's No. 1 Castleman, SW NE Sec. 8-4-26w ..Shut down 625 ft.

HARPER COUNTY

Sinclair Oil & Gas Co.'s No. 1 Howell, C SW SW Sec. 14-26-24w .....Fishing 6,161 ft.

HASKELL COUNTY

Holden's No. 1 Phillip, SE cor. Sec. 3-9-18e .....Shut down 1,200 ft.
Marion Oil's No. 1 Sanders, NW NE SW Sec. 10-9-18e..Shut down 2,387 ft.
Sanboise Gas' No. 1 Unknown, SW NW SE Sec. 32-9-21e..Shut down 2,100 ft.

HUGHES COUNTY

Wright et al's No. 1 Ott, SE SW Sec. 15-5-11 .....Rig.
Canady et al's No. 1 Kanard, NW SW Sec. 29-9-12 .....Fishing 1,275 ft.
Irwin et al's No. 1 Jones, SE NW Sec. 30-5-10 .....Rig on ground.
McCullough Oil Co.'s No. 1 Scott, NW NE Sec. 23-6-8 ....Drlg. 3,975 ft.

JACKSON COUNTY

Altus Oil Co.'s No. 1 Northington, NE cor. NE Sec. 4-1-20w .....Shut down 2,020 ft.

KINGFISHER COUNTY

Superior Oil Co.'s No. 1 Story, SE cor. Sec. 25-19-5w ....Fishing 6,285 ft.
Galt Brown's No. 1 Wolf, NW SE Sec. 6-16-7w .....Shut down 6,015 ft.

KIOWA COUNTY

Hyde et al's No. 1 Jones, SE cor. Sec. 23-3-18w-60 .....Shut down 490 ft.
Merrick Oil Co.'s No. 1 Kelly, NW cor. SE Sec. 20-7-17w..Drlg. 1,220 ft.

LEFLORE COUNTY

Red Bank Oil Co.'s No. 1 fee, SE SW NW Sec. 23-9-24..Drlg. 5,400 ft.; 15,000,000 ft. gas; rig burned; building rig.

LATTIMER COUNTY

Limestone O. & G. Co.'s No. 1 Shaw, NW cor. NE NW Sec. 23-5-18e .....Shut down 1,450 ft.
Limestone Oil & Gas Co.'s No. 1 McMurray, SW cor. SW Sec. 15-5-18 .....Fishing 4,020 ft.

LINCOLN COUNTY

Morgan & Flynn's No. 1 Johnson, SW NE Sec. 1-16-5 ....Drlg. 2,510 ft.
Phillips Pet. Co.'s No. 1 Stephens, SE cor. NW Sec. 29-12-3 .....Drlg. 5,100 ft.

LOGAN COUNTY

Haley & Smith's No. 1 Guier, SE cor. SW Sec. 33-18-3w..Shut down 3,970 ft.

McINTOSH COUNTY

Jennings Bros.' No. 1 Crabtree, NW SW NE Sec. 31-10-14 .....Drlg. 1,200 ft.
Spring Valley Oil Co.'s No. 1 Carr, SE cor. NE NW Sec. 16-10-13e .....Hole full water 3,245-47 ft.; abandoned.
Patterson and others' No. 1 Smith, SW cor. NW SE Sec. 32-9-16 .....Shot 240 qts. 5,446-5,559 ft.; shot went off up hole; fishing.

MAJOR COUNTY

Earl and others' No. 1 Turner, C NE NE Sec. 23-20-14w..Rig.

MUSKOGEE COUNTY

Mid-Western Oil Co.'s No. 1 Unknown, C NW SW Sec. 31-12-19 .....Location.
Sioux Oil Co.'s No. 1 Unknown, NW SE Sec. 21-11-19 ....Shut down 1,011 ft.
Cooper-Badget's No. 1 Young, NW NE NE Sec. 7-12-20e ..Shut down 50 ft.

NOBLE COUNTY

Peerless et al's No. 1 Wentz, NW SW Sec. 22-22-1 .....Drlg. 2,400 ft.

OSAGE COUNTY

Lewis Prod. Co.'s No. 1, NW cor. Sec. 23-26-7 .....Drlg. 1,028 ft.

OKFUSKEE COUNTY

Henry Oil Co.'s No. 1 Harjo, Sec. 36-12-9 .....Shut down 2,795 ft.
Prairie's No. 1 Smith, SW NW Sec. 18-12-10 .....Drlg. 3,891 ft.
E. L. Robinson's No. 1 Rice, NW Sec. 2-10-9 .....Location.
Shepard et al's No. 1 Neveas, SE NW SW Sec. 3-12-10 ..Drlg. 3,523 ft.

OKLAHOMA COUNTY

Ryan & Martin's No. 1 Lawton, NE NW Sec. 3-11-2w ..Drlg. 1,200 ft.
Tom Slick Oil Co.'s No. 1 Martin, C NW NW Sec. 13-13-1w .....Drlg. 6,100 ft.
Hall & Briscoe's No. 1 Holmes, NE cor. SW SE Sec. 10-11-3w .....Fishing 4,750 ft.

PITTSBURG COUNTY

Mid-Western Oil Co.'s No. 1 Unknown, SE SW NE Sec. 11-7-18 .....Spudding.
Empire O. & R. Co.'s No. 1 Williams, C NE SE Sec. 33-7-16e .....Pulling 10-in. csg. 3,100 ft.
Kerr & Koy's No. 1 Hall, C NW NW Sec. 32-4-12 .....Drlg. 3,300 ft.

PONTOTOC COUNTY

Indian Territory Illuminating Oil Co.'s No. 1 McFarland, NW cor. Sec. 4-5-5 .....Wilcox 3,142-45 ft.; shut down.
Independent and Shaffer's No. 1 Moses, NE SE SW Sec. 10-5-4 .....Wilcox 3,332-41 ft.; show water; plugging back.

POTTAWATOMIE COUNTY

Payne Drlg. Co.'s No. 1 Bullock, SE NE Sec. 22-6-3 ....Drlg. 1,000 ft.
Lippa Drlg. Co.'s No. 1 Pittman, SW NW Sec. 3-8-4 ....Drlg. 4,100 ft.
Twin State's No. 1 Ray, NW SW Sec. 3-8-4 .....Drlg. 3,120 ft.
Prairie O. & G. Co.'s No. 1 Bodkin, SW cor. Sec. 26-8-4 ..Drlg. 3,827 ft.
Keister & Manning's No. 1 Tibbs, NE SW Sec. 9-8-4 ....Fishing 4,240 ft.
Amerada's No. 1 Vineyard, NW NE NE Sec. 15-7-3 ....Shut down 5,041 ft.; hole full water 5,093 ft.; plugged back to 4,830-56 ft.; made 130 bbls.
Gypsy Oil Co.'s No. 1 Randolph, NW NE Sec. 23-6-4....Simpson 4,020-50 ft.; show water.

ROGER MILLS COUNTY

Prairie O. & G. Co.'s No. 1 Mingo, SE NE Sec. 25-6-5 ..Drlg. 2,480 ft.
Bucy & Stone's No. 1 Williams, C SW Sec. 23-12-24w ....Rig.
L. C. Hivick's No. 1 Davis, C NW NE Sec. 4-11-26w ....Shut down 1,300 ft.

SEMINOLE COUNTY

Prairie O. & G. Co.'s No. 1 Harjo, NE SW NE Sec. 25-6-7 .....Drlg. 600 ft.
Sunray Oil Co.'s No. 1 Sunday, NW SE Sec. 25-5-5 .....Location.
Prairie & Slick's No. 1 Bettsey, NW SW Sec. 36-6-6 ....Wilcox 4,115-20 ft.; water; abandoned.
Harris' No. 1 Harjoche, SE NE SE Sec. 8-6-6 .....Wilcox 4,047-52 ft.; plugged back to 2,950 ft.; swabbed 320 bbls.

SEQUOYAH COUNTY

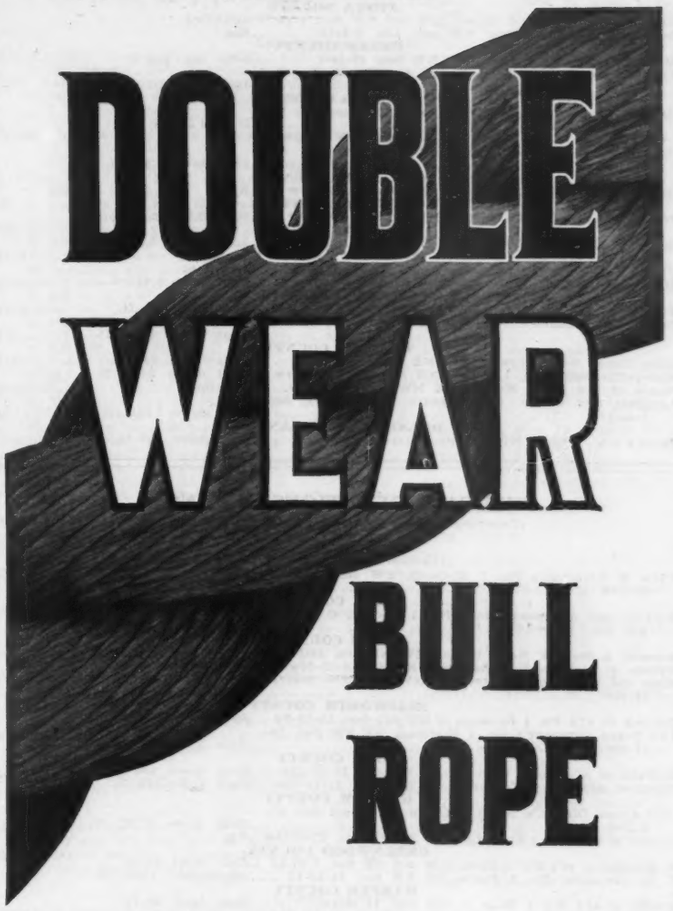
Hunt and others' No. 1 Unknown, SE cor. NW SW Sec. 12-12-22 .....Shut down 1,260 ft.
Buffington and others' No. 1 Melcher, C SW NW Sec. 31-12-24 .....Shut down 3,000 ft.

WOODS COUNTY

Peerless O. & G. Co.'s No. 1 Unknown, C NW NE Sec. 23-28-16w .....Drlg. 1,056 ft.
S. K. Miller's No. 1 Copenhavers, NW cor. NW Sec. 18-24-13w .....Rigged up and shut down.
Gypsy-Prairie and others' No. 1 Thompson, SE cor. SW Sec. 10-25-15w .....Drlg. 5,992 ft.
Sinclair Oil & Gas Co.'s No. 1 Showwalter, C SW SW Sec. 33-27-16w .....Drlg. 5,560 ft.

WOODWARD COUNTY

Farrond et al's No. 1 Unknown, SE cor. SW SE Sec. 2-23-17w .....Shut down 1,387 ft.
Prairie Oil & Gas and others' No. 1 Wilber, NE cor. NW Sec. 23-23-17w .....Drlg. 5,787 ft.
Billy's Oil Co.'s No. 1 Watt, C SE Sec. 9-23-20w .....Drlg. 4,967 ft.
Burgoyne Bros.' No. 1 Merkins, SW cor. SE NE Sec. 15-21-19w .....Shut down 1,910 ft.



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SOUTHERN OKLAHOMA
ATOKA COUNTY
Bryant-Croxton's No. 1 Mason, NW NE NW Sec. 4-14-14..Spudding.
Bookshire's No. 1 Guinn, NW cor. Sec. 8-3-10 .....Rig.
BRYAN COUNTY
Marshall's No. 2 fee, C SW SE NW Sec. 26-5s-7 .....6-in. csg. 265 ft.
Yale Oil Syndicate's No. 1 Craige, C NW NE Sec. 36-9s-9e .....Drlg. 1,890 ft.
CARTER COUNTY
Campen-Lasater Co.'s No. 1 Anderson, NE cor. SE NE SE Sec. 32-4s-2 .....Drlg. 1,500 ft.
CHOCTAW COUNTY
Choctaw Petroleum Co.'s No. 1 Wilson, SW cor. SW Sec. 15-6-19e .....Shut down 1,346 ft.
COMANCHE COUNTY
G. W. Stogner's No. 1 Doebel, C SW SW Sec. 3-3-5w ....Rig.
COTTON COUNTY
Wirt Franklin's No. 1 Bandy, NW cor. Sec. 4-4s-10w ....Drlg. 2,916 ft.
JOHNSTON COUNTY
Smith & Knisely's No. 1 Lane, E half Sec. 29-1s-7....Shut down 2,254 ft.
McCURTAIN COUNTY
Utopia Pet. Co.'s No. 1 Unknown, SE NW Sec. 14-9s-25..Location.
Milton et al's No. 1 Vase, SW NW Sec. 26-6s-21 .....Shut down 1,490 ft.
STEPHENS COUNTY
Smythe et al's No. 1 Johnson, NE cor. Sec. 30-2-8w ....Shut down 25 ft.
Porter & Monahan's No. 1 Robberson, SE NW Sec. 23-3s-4w .....Shut down 3,513 ft.
TILLMAN COUNTY
Allen Bros.' No. 1 Howell, SW NE Sec. 13-1-17w .....Shut down 610 ft.
Staley-Chenault's No. 1 Crane, NE SE Sec. 25-4s-14w ..Shut down 2,000 ft.
Nance et al's No. 1 Massie, NE NW Sec. 36-1S-6w ....Location.
Landfair and others' No. 1 Smith, SE SW SE Sec. 6-2s-16w .....Shut down 2,535 ft.
OKLAHOMA PANHANDLE
Skaer's No. 1 Hitch, NW cor. Sec. 25-1-15e .....Shut down 250 ft.

WILDCAT OPERATIONS IN KANSAS

(Descriptions are East unless otherwise marked)

(Continued from Page 52)

Dixie & Amerada's No. 1 McCarty, SW cor. Sec. 22-25-17w .....Drlg. 235 ft.
ELK COUNTY
Empire and Arkansas Fuel's No. 1 Record, C SW SE SW Sec. 32-30-10 .....Rig.
ELLIS COUNTY
Streeter & Stearns' No. 1 Leiker, SW NE Sec. 26-13-20w..Drlg. 1,200 ft.
Byrene et al's No. 1 Fisher, NW SE Sec. 4-11-20w ....Shut down 1,000 ft.
Rush Oil Co.'s No. 1 Gatewood, NW cor. NW Sec. 4-15-20w .....Fishing 2,555 ft.
ELLSWORTH COUNTY
Tatlock et al's No. 1 Sackem, C SW SE Sec. 25-17-9w ..Shut down 675 ft.
The Texas Company's No. 1 Sherman, NE SW Sec. 16-17-6w .....Drlg. 3,725 ft.
FORD COUNTY
McNabb et al's No. 1 Unknown, C SE Sec. 26-27-22w....Shut down 400 ft.
Swain et al's No. 1 Kenthorne, C NW Sec. 21-25-24w ..Shut down 390 ft.
GRAHAM COUNTY
Gulf Coast Oil Co.'s No. 1 Johnson, C S half Sec. 27-8-25w .....Shut down 4,232 ft.
Naylor et al's No. 1 St. John, NW SE SE Sec. 27-8-25w..Rig.
GREENWOOD COUNTY
F. Konkay et al's No. 1 Rock, NW NE NE Sec. 7-27-12 ..Shut down 50 ft.
T. K. Simmons' No. 1 Steele, SE NE Sec. 32-22-12 ....Abandoned 1,940 ft.
HARPER COUNTY
Boeler et al's No. 1 Bear, C NE Sec. 21-31-6w .....Shut down 50 ft.
Tom Slick Oil Co.'s No. 1 Miller, SE cor. Sec. 13-34-5w .....Shut down 5,400 ft.; Wilcox 5,268-74 ft.; hole full water.
Tom Slick Oil Co.'s No. 1 Thompson, NW cor. Sec. 19-33-6w .....Wilcox 4,975 ft.; drlg. 5,100 ft.; water.
HARVEY COUNTY
Walton Oil Co.'s No. 1 Neiman, C NE SE Sec. 13-24-2 ..Drlg. 3,108 ft.
Superior's No. 1 Regier, SE NW Sec. 11-22-3w .....Drlg. 560 ft.
Independent & Reserve Oil Co.'s No. 1 Moulds, C NE Sec. 7-24-1w .....Drlg. 3,260 ft.
Liggett et al's No. 1 Regier, C SE NW SE Sec. 2-23-3w..Drlg. 2,880 ft.
E. W. Marland, Inc.'s No. 1 Neiman, C NE SE NE Sec. 8-24-2 .....Shut down 1,540 ft.
McCulloch et al's No. 1 Prouty, NW cor. SW Sec. 3-23-1w .....Drlg. 2,703 ft.
Mrs. Gay et al's No. 1 Grove, C NW NE NW Sec. 29-23-1w .....Shut down 3,295 ft.
Jolly & Ogg's No. 1 Randall, NE cor. NE Sec. 11-24-1w..Shut down 3,444 ft.
Jolly & Ogg's No. 1 Hupp, SE cor. NE Sec. 22-23-1w ....Shut down 3,220 ft.
HODGEMAN COUNTY
Phillips Pet.'s No. 1 Hausman, NW NE Sec. 30-22-22w..Drlg. 4,250 ft.
JEFFERSON COUNTY
Wichita Oil Co.'s No. 1 Simpson, NW cor. SW SW Sec. 19-10-17 .....Rigged up and shut down.
KINGMAN COUNTY
D. P. Fleeger's No. 1 Ashcraft, SE SW NE Sec. 16-28-7w .....Drlg. 3,498 ft.
White Eagle's No. 1 Lorenz, C NE SW SE Sec. 25-27-5w..Drlg. 3,410 ft.
LANE COUNTY
Robinson's No. 1 Dickerson, Sec. 11-18-27w .....8-in. csg. 2,625 ft.
Blankenship Pet. Co.'s No. 1 Schaeffer, NE cor. NE Sec. 24-16-28w .....Spudded and shut down.
LYON COUNTY
Gordan-Stats' No. 1 Proche, C NE SE NW Sec. 16-17-10..Drlg. 670 ft.
Harry Mortock's No. 1 Dubolt, NW NE Sec. 24-20-1 ....Drlg. 1,615 ft.
MARION COUNTY
Marshall et al's No. 1 Higgins, NE cor. Sec. 33-19-5 ....Rig.
White Eagle's No. 1 Ucker, NE NW Sec. 24-17-2 .....Drlg. 2,445 ft.
American O. & R. Co.'s No. 1 Urie, NW SW NW Sec. 10-17-3 .....Hole full water 3,100-05 ft.; abandoned.
McPHERSON COUNTY
Dixie Oil Co.'s No. 1 Johnson, SW cor. Sec. 20-17-3w ..Rig.
Harry Skelly et al's No. 1 Neufeldt, SE NE Sec. 19-21-3w..Location.
McCulloch Oil Co.'s No. 1 Cornelius, SW cor. Sec. 7-21-4..Drlg. 2,760 ft.
Kansas Oil Co.'s No. 1 Otto, SW NW Sec. 21-20-1w ....Shut down 2,000 ft.
Reynolds et al's No. 1 Koohn, NE SE NE Sec. 15-20-2w ..Drlg. 2,000 ft.
McPherson O. & G. Co.'s No. 1 Fisk, SW NE NE Sec. 15-21-2w .....Drlg. 2,955 ft.
McPherson O. & G. Co.'s No. 1 Sorenson, C SE Sec. 23-18-2w .....Drlg. 2,892 ft.
Milmac's No. 1 Decker, NW cor. Sec. 11-20-3w .....Fishing 1,500 ft.
Lario et al's No. 1 Diener, SE SW Sec. 10-20-1w .....Hole full water 3,450-55 ft.; abandoned.
Perry et al's No. 1 Wade, C SE Sec. 20-19-4w .....Drlg. 3,840 ft.
Slick, Pryor & Lockhart's No. 1 Gratton, C NE NW NW Sec. 34-20-3w .....Chat 3,055-3,108 ft.; pump 256 bbls. 2 per cent water; completed.
Heimerich & Payne's No. 1 Klassen, SE NE NE Sec. 14-21-1w .....Hole full water 3,560-62 ft.; abandoned.
Transcontinental Oil Co.'s No. 1 Algers, NE SW Sec. 1-19-5w .....Drlg. 3,467 ft.
White & Chaney's No. 1 Love, NE cor. Sec. 16-34-42w...Rig on ground.
MORRIS COUNTY
Arrow O. & G. Co.'s No. 1 Kinkle, C NW NE Sec. 8-16-7..Shut down 50 ft.
NORTON COUNTY
Richards et al's No. 1 Colby, C SW Sec. 17-4-21w .....Rig on ground.
NESS COUNTY
Continental Oil Co.'s No. 1 Moses, NE SE Sec. 7-18-25w .....Drlg. 4,428-31 ft.; swabbed 220 bbls.
OSBORNE COUNTY
Phillips Pet. Co.'s No. 1 Grieve, NW SE NE Sec. 6-7-12w..Drlg. 3,570 ft.
Mid-Kansas' No. 1 Boyce, SE cor. NW Sec. 18-6-13w ....Drlg. 3,937 ft.
PAWNEE COUNTY
Prairie O. & G. Co.'s No. 1 Black, SW NE NE Sec. 11-20-18w .....Drlg. 335 ft.
PRATT COUNTY
O'Haver & Jones' No. 1 Garacke, C NE SW Sec. 7-26-14w .....Drlg. 1,445 ft.
O'Haver & Jones' No. 1 Lunt, C SW NW Sec. 15-28-14w..Fishing 4,550 ft.
Wilcox O. & G. Co.'s No. 1 Unknown, SW NW Sec. 7-26-15w .....Drlg. 1,100 ft.
RENO COUNTY
Empire O. & R. Co.'s No. 1 Blitz, NE NW Sec. 36-25-4w .....Drlg. 3,363 ft.
Wilcox O. & G. Co.'s No. 1 Unknown, SW NW Sec. 22-26-8w .....Drlg. 2,465 ft.
Witt's No. 1 Olsen, C SE NW Sec. 14-22-6w .....Fishing 2,010 ft.
Skelly Oil Co.'s No. 1 Birkett, NE SW Sec. 30-24-7w ....Drlg. 3,930 ft.
Milmac Oil Co.'s No. 1 Stucky, SW cor. NW Sec. 17-26-5w .....Shut down 3,998-4,018 ft.; hole full water; abandoned.
RICE COUNTY
Tatlock et al's No. 1 Ploog, C SW SE, Sec. 33-18-9w ..Rig.
Boucher's No. 1 Bieg, Sec. 16-21-10w .....Drlg. 630 ft.
C. P. McBride's No. 1 Green, C NW Sec. 33-19-6w .....Rig on ground.
Miller & Detrick's No. 1 Shumway, C SW Sec. 2-20-9w ..Shut down 3,100 ft.
Burgher's No. 1 Fair, C SE NE NE Sec. 14-21-10w ....Drlg. 1,200 ft.
Derby Oil Co.'s No. 1 Johnson, C NW NE SE Sec. 24-20-6w .....Drlg. 400 ft.; new hole.
Milmac's No. 1 Cain, C SE Sec. 29-19-7w .....Drlg. 3,245 ft.
Rig on ground.
Danciger et al's No. 1 Bell, C SW Sec. 16-19-8w .....Drlg. 290 ft.
McCullough et al's No. 1 Williams, C NE Sec. 35-20-8w..Rig.
RILEY COUNTY
Arkansas Fuel Oil Co.'s No. 1 Martin, SE NE SW Sec. 24-8-4 .....Drlg. 1,710 ft.
Grey et al's No. 1 Smith, NE SE Sec. 30-6-6 .....Shut down 1,970 ft.
Derby & Shaw's No. 1 Lindstrom, NE cor. Sec. 32-7-5e..Shut down 2,246 ft.
RUSSELL COUNTY
Cress & Hacke's No. 1 Unknown, SE cor. Sec. 6-13-12w..Rig on ground.
Midwest Exploration's No. 1 Benson, SW cor. Sec. 4-14-15w .....Show oil 3,064-72 ft.
Prairie Oil & Gas Co.'s No. 1 Brungardt, C NW SE NW Sec. 31-12-15w .....Completed 3,044-80 ft.; 180 bbls.
ROOKS COUNTY
Central Commercial's No. 1 Baxa, Sec. 22-9-17w .....Fishing 2,520 ft.
RUSH COUNTY
Milmac's No. 1 Mohr, C NW Sec. 11-18-16w .....Shut down 50 ft.
Danciger Oil Ref. Co.'s No. 1 Pivonka, NE cor. SW NE Sec. 17-19-17w .....Shut down 4,044 ft.
SALINE COUNTY
Dixie Oil Co.'s No. 1 Thorstenburg, NW NE Sec. 10-16-3w .....Drlg. 3,598 ft.
Austin et al's No. 1 Olsen, NW SW SE Sec. 10-15-4w ....Drlg. 3,420 ft.
Templeman's No. 1 Lanbengager, C SW Sec. 20-15-5w ..Drlg. 3,268 ft.
Twin Mounds' No. 1 Weis, NW NE NW Sec. 20-13-4w..Shut down 700 ft.
SEDGWICK COUNTY
Moore's No. 1 Stewart, C NE SE NW Sec. 18-28-1w ....Drlg. 2,635 ft.
Tavender et al's No. 1 McLean, SE SW SE Sec. 23-26-1w .....Rig.
Wentz Oil Corp.'s No. 1 Allison, NE NW Sec. 24-26-2 ....Shut down 3,220 ft.
Wilson et al's No. 1 Ottaway, SW NW Sec. 16-28-2w ....Rig.
Marland and Amerada's No. 1 Sensorth, NW cor. Sec. 25-28-4w .....Drlg. 3,820 ft.
Barnett O. & G. Co.'s No. 1 Davidson, NW cor. NW SW Sec. 27-26-1e .....Shut down 3,358 ft.
McCullough Oil Co.'s No. 1 Buckles, NW cor. SE Sec. 3-28-1w .....Drlg. 1,115 ft.
LaFont et al's No. 1 Carlton, C SE SE SW Sec. 24-28-1e..Shut down 1,385 ft.
SHAWNEE COUNTY
Jenkins & Scott's No. 1 Sherman, NW NE Sec. 28-10-15 .....Rig.
Jenkins & Scott's No. 1 Haden, NE SE Sec. 8-12-14 ....Shut down 750 ft.
SHERIDAN COUNTY
Mandalin O. & G. Co.'s No. 1 Unknown, C SE SW SW Sec. 27-7-26w .....Spudded; shut down.
SHERMAN COUNTY
A. L. Henson et al's No. 1 Murry, NE cor. SE NW Sec. 22-7-40w .....Shut down 3,035 ft.
STAFFORD COUNTY
Gibson's No. 1 Mueller, C SW Sec. 11-23-14w .....Drlg. 937 ft.
STEVENS COUNTY
McKenna's No. 1 Unknown, C NW NW Sec. 29-33-36w..Drlg. 1,350 ft.
Trees Oil Co.'s No. 1 Thompson, C NE SW Sec. 3-35-38w..Shut down 2,250 ft.
W. Sidwell et al's No. 1 Kelly, SW cor. NE Sec. 16-34-38w .....Shut down 1,600 ft.
SMITH COUNTY
Phillips Pet.'s No. 1 Clydesdale, SE NW Sec. 23-5-14w..Drlg. 3,315 ft.
SUMNER COUNTY
Hatfield's No. 1 Dauber, NE cor. Sec. 18-30-1w .....Shut down 50 ft.
Kingwood Oil Co.'s No. 1 Stayton, C NE Sec. 18-31-2w..Drlg. 2,925 ft.
Slick et al's No. 1 Peasel, NW cor. Sec. 33-31-1w .....Drlg. 2,910 ft.
Lario O. & G. Co.'s No. 1 Osborne, NE SE Sec. 21-30-1w .....Drlg. 3,200 ft.
E. K. Carey & Larado Oil Co.'s No. 1 Welsch, SW SE Sec. 9-34-1e .....Drlg. 2,900 ft.
Shell Pet. Corp.'s No. 1 Armstrong, NE cor. Sec. 12-33-1e.Drlg. 3,335 ft.
Davidson et al's No. 1 Strickland, SW cor. SE Sec. 12-35-1w .....Rig.
TREGO COUNTY
Dixie & Amerada's No. 1 Reitmayer, C NE NE Sec. 19-14-21w .....Shut down 825 ft.
Prairie Oil & Gas Co.'s No. 1 Kutina, C NE SW NE Sec. 29-15-21w .....Fishing 3,325 ft.
Producers & Refiners Corp.'s No. 1 Kingsley, C SE NW NW Sec. 24-14-21w .....Drlg. 1,545 ft.
Phillips Pet. Co.'s No. 1 Spitz, SE cor. Sec. 24-12-25w ..Drlg. 3,365 ft.
Mid-Kansas' No. 1 Ridgeway, NE SW Sec. 28-12-21w ....Shut down 3,968-70 ft.; water.
Day et al's No. 1 Gugler, SW NE NE Sec. 36-12-21w ....Shut down 50 ft.
Day et al's No. 1 Unknown, NE NW SW Sec. 2-11-21w ..Shut down 3,175 ft.
WASHINGTON COUNTY
McCool & Vincent's No. 1 Linn, NW cor. NE Sec. 27-4-3..Drlg. 3,075 ft.
WOODSON COUNTY
Shaffer & Howell's No. 1 Levering, CSL SE Sec. 12-25-14..Drlg. 650 ft.
F. Young's No. 1 Headens, SE NE Sec. 11-2s-14 .....Abandoned 1,625 ft.

WILDCAT OPERATIONS IN NEBRASKA

FRANKLIN COUNTY
U. R. Drlg. Co.'s No. 1 Brunkle (twin well), C NW SW NE Sec. 2-3n-13w .....Rig.
CHASE COUNTY
Chase Pet. Co.'s No. 1 Ingold, C NE Sec. 24-6n-38w ....Shut down 4,200 ft.; will run 5-in. csg.
FURNAS COUNTY
Southwestern Pet. Corp. of Nebraska's No. 1 Montague, SE SW SW Sec. 28-1n-22w .....Shut down 1,750 ft.
Graham Bros.' No. 1 Edwards, NW SW Sec. 13-2n-22w..Drlg. 3,250 ft.
RICHARDSON COUNTY
Norton et al's No. 1 Hauser, NE cor. Sec. 26-1-14 .....Location.
WEBSTER COUNTY
Mid-Kansas Exploration Co.'s No. 1 Platt, C SE one-half Sec. 3-1n-11w .....Shut down 555 ft.

LOUISIANA-ARKANSAS PROVEN AREAS

(Continued from Page 55)

Ohio Oil Co.'s No. 4 Hunter, 330 ft. N and W, SE cor. NW NE, Sec. 17-19-14 ..... Derrick.
Ohio Oil Co.'s No. 6 Hunter, 330 ft. S, 330 ft. W, NE cor. NW NE, Sec. 17-19-14 ..... Cored S.W. sand; S.D; W.O; T.D. 2,482 ft.
Old River Oil Corp.'s No. 1 Byrd, Sec. 15-19-14 (no check). Fishing for string; T.D. 2,375 ft
Standard Oil Co.'s No. 4 School, Sec. 16-19-14 ..... Began drlg. Nov. 6; cmtd. 10-in. 97 ft; drlg. 2,100 ft.
The Texas Co.'s No. 3 Hunter, 990 ft. W, 330 ft. N, SE cor., Sec. 8-19-14 ..... Recmtng. bottom of hole; T.D. 2,448 ft.

CADDO PARISH—OIL CITY

Arrow Synd.'s No. 1 Pender, 200 ft. N, 440 ft. E, SW cor., NW NW, Sec. 11-20-15 ..... Tested S.W. 2,231 ft; arranging to deepen.
Gulf Ref. Co.'s No. 21-A Levee Board, 1,126 ft. S, 650 ft. E, NW cor. NE, Sec. 34-21-16 ..... Derrick
Magnolia Pet. Co.'s No. 19 Doan-Thigpen, 330 ft. N, 990 ft. W, SE cor., Sec. 6-20-15 ..... Drlg. hard sand and lime 2,604 ft.
The Texas Co.'s No. 72 Levee Board, 725 ft. N, 210 ft. E, SW cor. SE, Sec. 27-21-16 ..... Rigging up.
J. C. Tippett's No. 1 Levee Board, 1,120 ft. W, 200 f., N, SE cor. SW, Sec. 26-21-16 ..... S.W. 1,860 ft; plugging back to 1,854 ft.

PINE ISLAND

Double H Oil Co.'s No. 12 Spell, 850 ft. N, 800 ft. W, SE cor. NE, Sec. 15-21-15 ..... Location.
E. W. McGoldrick's No. 1 Dreyfuss-Lane, 515 ft. N, 300 ft. E, SW cor. NE, Sec. 15-21-15 ..... Began drlg. Nov. 18; 100 ft.
Simplex Oil Co.'s No. 7 Hunsicker, 670 ft. W, 400 ft. S, NE cor. SE, Sec. 15-20-15 ..... W.O.S.R; 2,219 ft.

CLAIBORNE PARISH—HOMER

Oakes et als' No. 1 Richardson, NE SE, Sec. 19-21-17 .... S.D. 1,700 ft.

LA SALLE PARISH—URANIA

Air Lift Oil Co.'s No. 8-A Hardtner, Sec. 7-10-2e (no check) ..... Drlg. 1,200 ft.
Ark. Fuel Oil Co.'s No. 5 Urania, 200 ft. S, 200 ft. E, NW cor. NE SE, Sec. 24-10-1e ..... Cmtd. 13⅜-in. at 1,560 ft.
Kinney, Hardtner & Randall's No. 1 Kinney, SW SW, Sec. 7-10-2e ..... S.D. 1,570 ft.
Philp et als' No. 1 Urania, SE cor. NE NE, Sec. 1-10-1e .. Tested 500,000 ft. gas and sanded up; C.O.; setting liner to test; T.D. 730 ft.
Randall et als' No. 3 Urania, Sec. 1-10-1e ..... S.D. 675 ft.
Trio Oil Co.'s No. 2 Urania, NE cor. SW SW NW, Sec. 19-10-1e ..... Rigging up.

MOREHOUSE PARISH

Bahan & Bahan's No. 2 Feazel, 990 ft. S, 330 ft. W, NE cor., Sec. 3-20-4 ..... Rigging up.
J. S. Herkness' No. 11 Bowles, 4,620 ft. S, 1,980 ft. E, NW cor. Sec. 18-20-5 ..... Set 6-in. 2,157 ft.
J. S. Herkness' No. 12 Bowles, 3,392 ft. E, 3,300 ft. S. NW cor., Sec. 18-20-5 ..... Location.
Magnolia Pet. Co.'s No. 6 U. S. Govt., 490 ft. N, 254 ft. W, SE cor., Lot 2, Sec. 33-21-5 ..... Began drlg. Nov. 11; cmtd. 15½-in. 196 ft; 10¾-in. 850 ft.
Southern Carbon Co.'s No. 12 Tensas, 660 ft. S, 660 ft. E, NW cor., Sec. 2-20-4 ..... Drlg. in 2,230 ft.
Southern Carbon Co.'s No. 13 Tensas, 660 ft. S, 1,320 ft. W, NE cor., Sec. 4-20-4 ..... Derrick.
United Carbon Co.'s No. 2 Patton, 660 ft. N, 660 ft. E, SW cor. SE, Sec. 2-20-4 ..... Location.
United Carbon Co.'s No. 3 Patton, 660 ft. W, 660 ft. S, NE cor. SE, Sec. 2-20-4 ..... Location.

OUACHITA PARISH

Amalgamated Carbon Co.'s No. 2 Cole, 742 f.. E, 703 ft. S, NW cor., Sec. 43-19-4 ..... Rigging up.
Amalgamated Carbon Co.'s No. 3 Cole, 1,616 ft. E, 721 ft. S, NW cor., Sec. 42-19-4 ..... Drlg. 6-in. plug; bailing csg; T.D. 2,112 ft.
Austin & Jordan's No. 1 Albright, 1,597 ft. E, 744 ft. N, common cor. Secs. 10, 9 and 13, in Sec. 13-18-3 .. Began drlg. Nov. 13; cmtd. 12-in. 178 ft; 8-in. 896 ft.
Chauvin Gas Co.'s No. 2 Slagle Johnson, 3,498 ft. S, 26 ft. E, NW cor., Sec. 49-18-4 ..... Began drlg. Nov. 3; set 12-in. 158 f..; T.D.
Chauvin Gas Co.'s No. 3 Slagle Johnson, 2,539 ft. S, 55 ft. E, NW cor., Sec. 47-18-4 ..... Location.
Chauvin Gas Co.'s No. 4 Slagle Johnson, 4,505 ft. S, 257 ft. E, NW cor. Sec. 47-18-4 ..... Location.
Hope Prod. Co.'s No. 1 Fairbanks, 660 ft. N, 624 ft. E, SW cor. SE, Sec. 25-20-4 ..... Tested 500,000 ft. gas; arranging to deepen 2,160 ft.
Hope Prod. Co.'s No. 2 Fairbanks, 1,876 ft. E, 628 ft. N, SW cor. SE, Sec. 25-20-4 ..... Location.
Hope Prod. Co.'s No. 3 Fairbanks, 1,876 ft. E, 628 ft. S, NW cor. NE, Sec. 36-20-4 ..... Location.
G. E. Jordan's No. 1 Anding, NW NE, Sec. 18-18-5 ..... Plugging back to 2,234 ft; T.D. 2,480 ft.
La. Gas & Fuel Co.'s No. 1 Beard, Sec. 46-18-4 ..... Location.
Mack & Pipes' No. 1 Burke est., 654 ft. N, 497 ft. E, SW cor., Sec. 6-18-5 ..... Drlg. 2,070 ft.
Magnolia Pet. Co.'s No. 2 fee 401, 660 ft. S, 660 ft. E, NW cor., Sec. 2-18-3 ..... Derrick.
Magnolia Pet. Co.'s No. 4 U. S., Sec. 20-19-5; reported completed July 31, in error ..... Tested 1,000,000 ft. gas at 515 lbs. rock pressure; set liner 2,528 ft; bailed dry; plugged back to 2,200 ft; estimated 500,000 ft. gas; W.O; waiting orders 2,528 ft.
Michlouzanna O. & G. Dev. Co.'s No. 1 Osterlind, 6,877 ft. S, 819 ft. W, NW cor. irregular Sec. 42-18-4 .... Derrick.
New Process Carbon Co.'s No. 2 Cole, 1,971 f.. E, 1,820 ft. N, SW cor., Sec. 35-20-4 ..... Cmtd. 8-in. 2,115 ft.
Palmer Corp.'s No. 1 Cagle, 1,964 ft. S, 476 ft. E, NW cor., Sec. 7-18-5 ..... Cmtd. 4½-in. 2,380 ft.
Sho-Van Gas Products Co.'s No. 2 W. Va., 186 ft. N, 67 ft. W, NW cor., Sec. 42, in Sec. 8 ..... Location.
Sho-Van Gas Products Co.'s No. 3 W. Va., 1,980 ft. S and W, NE cor., Sec. 8-18-4 ..... Location.
Sho-Van Gas Products Co.'s No. 4 W. Va., 1,078 f.. N. 294 ft. W, NE cor., Sec. 49, in Sec. 7 ..... Location.
Sho-Van Gas Products Co.'s No. 5 W. Va., 2,046 ft. S. 1,790 ft. W, NE cor. SE, Sec. 6-18-4 ..... Rigging up.
Southern Carbon Co.'s No. 14 Fairbanks, Sec. 43-20-4 ... Location.
Southern Carbon Co.'s No. 54 fee, 660 ft. N, 674 ft. W. SE cor. NE, Sec. 13-19-4 ..... S.D. 2,621 ft.
Southern Carbon Co.'s No. 4 Phillips, 660 ft. S, 660 ft. E, NW cor., Sec. 8-19-4 ..... Rigging up.
Trousdale & Wright's No. 2 Kate Cole, 240 ft. W. l.-311 ft. S of point where N line of Sec. 42 joins dividing line of Secs. 8 and 9, in Sec. 42-18-4 ..... Derrick.
Trousdale & Wright's No. 2 Kate Cole, Sec. 42-18-4e .... Began drlg. Nov. 12; cmtd. 12-in. 385 ft; 8-in. 1,030 ft.
Union Gas Products Co.'s No. 1 Hare, 660 ft. S, 660 ft. W, NE cor. NW, Sec. 22-19-5 ..... Rig up.
United Oil & Nat. Gas Products Co. of La.'s No. 5 Guthrie, 6,896 ft. N, 6,022 ft. W. cor. Secs. 49, 26, and 25, Sec. 49-20-5 ..... Derrick.
United Oil & Nat. Gas Products Co. of La.'s No. 2 Cole, 660 ft. S, 594 ft. E, C, Sec. 26-20-4 ..... Derrick.
United Oil & Gas Products Co.'s No. 5 Spade, 660 ft. N, 660 ft. W, SE cor. NE, Sec. 35-19-3 ..... Location.
W. Va. O. & G. Co.'s No. 9 W. Va., 1,980 ft. E, 1,320 ft. S, NW cor. SW, Sec. 5-18-4 ..... Began drlg. Nov. 4; cmtd. 12-in 192 ft; 8-in. 820 ft; drlg. 1,200 ft.

RED RIVER PARISH

Joe Danciger et als' No. 1 Pickett, 6,621 ft. S, 2,623 ft. W, NE cor., Sec. 15-13-11, in Sec. 23-13-11 ..... C.O. 2,400 ft; T.D. 2,555 ft.
Root Refineries, Inc.'s No. 1 Home State & Savings Bank, 330 ft. N, 330 ft. W, C, Sec. 8-13-10 ..... Oil show 2,570 ft; drill stem tes.; S.W; cored sand showing gas 2,598 ft; S D. 2,667 ft.
Triple Oil Co.'s No. 1 W. M. Pollock, Sec. 33-13-11 ..... Cmtd. 6⅝-in. 2,456 ft; W.O.S.R; 2,470 ft.

RICHLAND PARISH

Ark.-La. P. L. Co.'s No. 1 Chenault, 1,980 ft. W, NW, C, SE SE, Sec. 2-16-6 ..... Drlg. 2,325 ft.
W. C. Feazell's No. 1 R. B. Simon, 2,406 f.. W, 2,020 ft. S, NE°cor., Sec. 11-16-6 ..... Rig up.
W. C. Feazell's No. 1 E. L. Wilson, 647 ft. N, 241 ft. E, SW cor. NW, Sec. 31-16-6 ..... Cmtd. 12-in. 209 ft.
Industrial Gas Co.'s No. 1 Boughton, N 85 deg., 10 min. W, 4,458 ft., 865 ft. S, NE cor., Sec. 1-16-6 ..... Drlg. gumbo 1,625 ft.
Industrial Gas Co.'s No. 1-A J. H. Hemler, 1,431 ft. E, 660 ft. S, NW cor., Sec. 12-16-6 ..... Cmtd 6-in. 2,300 ft.
Industrial Gas Co.'s No. 1 Rayville State Bank, 660 ft. N, 660 ft. E, C, Sec. 12-16-6 ..... Drlg. rock 1,978 ft.
Industrial Gas Co.'s No. 1-C Sartor, 536 ft. N, 1,333 ft. E, SW cor., Sec. 21-16-6 ..... Cmtd. gas blowout 235 ft.
International Gas Products Co.'s No. 1 Boughton, Sec. 33-16-6 ..... Cmtd. 6-in. 2,280 ft.
Magnolia Pet. Co.'s No. 4 C. M. Noble, 400 ft. S, 660 ft. W, NE cor. SE NE, Sec. 35-16-5 ..... Location.
M. L. Meredith's No. 1 Holdness, 1,980 ft. S, 990 ft. W, NE cor., Sec. 15-16-6 ..... Began drlg. Nov. 19; T.D. 50 ft.
Northern La. Nat. Gas Co.'s No. 1-A Colvin, 1,320 ft. E, 370 ft. S, C, Sec. 34-17-6 ..... Cmtd. 6-in. 2,300 ft.
Northern La. Nat. Gas Co.'s No. 1 Pipes, 2,433 ft. S. 581 ft. E, C, Sec. 34-17-6 ..... Drlg. shale and boulders 2,253 f..
Northern La. Nat. Gas Co.'s No. 1 A. Purvis, 1,282 ft. S, 183 ft. E, C, Sec. 34-17-6 ..... Cmtd. 6-in. 2,300 ft.
Northern La. Nat. Gas Co.'s No. 1 C. M. Purvis, 1,821 ft. E, 630 ft. S, NW cor. SE NW, Sec. 3-16-6 ..... Drlg. 1,988 ft.
Palmer Corp.'s No. 2 Earle, 1,980 ft. N, 1,320 ft. W, SE cor., Sec. 31-17-6 ..... Drlg. 1,957 ft.
Palmer Corp.'s No. 1 Eubanks, 1,100 ft. N, 350 ft. E, SW cor. SE NW, Sec. 26-17-6 ..... D.S. test 2,917 ft; dry; arranging to deepen.
Palmer Corp.'s No. 4 Rhymes, 660 ft. S, 1,320 ft. W, NE cor NW, Sec. 28-17-6 ..... Plugged back to 2,450 ft; T.D. 3,127 ft.
Southern Carbon Co.'s No. 1 S. R. Humble, 600 ft. N, 600 ft. W, SE cor., Sec. 26-16-6 ..... Drlg. 1,525 ft.
United Carbon Co.'s No. 1 Roberts, 1,650 ft. N, 600 ft. W, SE cor., Sec. 21-16-6 ..... Set 12-in. 198 ft; 8-in. 915 ft; drlg. 1,117 ft.

SABINE PARISH—PLEASANT HILL

Bridges-Clark Oil Co.'s No. 3 Williams, 1,780 ft. N, 2,180 ft. E, SW cor., Sec. 33-10-12 ..... Began drlg. Nov. 12; cmtd. 10-in. 103 ft; drlg. 1,670 ft.
Magnolia Pet. Co.'s No. 4 E. E. Hall, 855 ft. N, 343 ft. W, SE cor. NW SW, Sec. 33-10-12 ..... Swbd. estimated 150 bbls; setting 2½-in. tubing and packer 3,239 ft.
Magnolia Pet. Co.'s No. 5 E. E. Hall, 350 ft. N, 312 ft. E, SW cor. NW SW, Sec. 33-10-12 ..... Location.
Reid Clark et als' No. 2 Moore, 1,600 ft. N, 330 ft. W, SE cor., Sec. 32-10-12 ..... Began drlg. Nov. 7; cmtd. 10-in. 104 ft; drlg. 2,470 ft.

UNION PARISH

Bahan & Bahan's No. 1 Bess, 47 ft. S, 64 ft. W. NE cor. NW, Sec. 11-20-3 ..... S.D. 130 ft.
Bahan & Bahan's No. 2 J. J. Parks, 1,119 ft. W, 375 ft. S, NE cor. SE, Sec. 2-20-3, (second hole) ..... Began drlg. Nov. 13; cmtd. 12-in. 185 ft; 8-in. 800 ft; drlg. 1,800 ft.
J. R. Bahan's No. 1 fee, 876 ft. W, 145 ft. S, NE cor. NW, Sec. 11-20-3 ..... Location.
E. S. Hall's No. 2 Spencer, 317 ft. W, 182 ft. S, NE cor. NW SE, Sec. 2-20-3 ..... Drlg. in; 2,078 ft.
Interstate Nat. Gas Co.'s No. 23 fee, 660 ft. S, 660 ft. E, NW cor., Sec. 33-20-3 ..... Drlg. 1,820 ft.
Lyons Gas Co.'s No. 1 A. B. Edwards, 722 ft. W, 897 ft. S, NE cor. NW, Sec. 11-20-3 ..... Derrick.
Lyons Gas Co.'s No. 1 H. M. Jones, 687 ft. W, 93 ft. S, NE cor. NW, Sec. 11-20-3 ..... Set 6⅝-in. 2,090 ft.

WEBSTER PARISH—COTTON VALLEY

Magnolia Pet. Co.'s No. 1 McCook & Hibbler, C SW SW, Sec. 22-21-10 ..... Set 5¾-in. 6,947 ft; T.D. 6,965 ft. steel line measure.
Ohio Oil Co.'s No. 45 Bodcaw, 660 ft. N, 600 ft. W, SE cor. SW SW, Sec. 21-21-10 ..... Drlg. anhydrite 4,629 ft.
Ohio Oil Co.'s No. 46 Bodcaw, 660 ft. N, 660 ft. E, SW cor. SW NW, Sec. 28-21-10 ..... Derrick.
Palmer Corp.'s No. 2 Miller, 520 ft. N, 504 ft. E, SW cor. SW, Sec. 28-21-10 ..... Cmtd. 9-in. 3,540 ft.
Standard Oil Co.'s No. 3 Bodcaw, 660 ft. N, 660 ft. E, SW cor. SE NE, Sec. 28-21-10 ..... Completed Nov. 11; 500,000 ft. gas 4,700 ft.
Standard Oil Co.'s No. 1-E Bodcaw, 660 ft. N, 660 ft. E, SW cor. SE, Sec. 28-21-10 ..... Location.
Standard Oil Co.'s No. 1 Thos. Crichton et al, 660 ft. S, 660 ft. W, NE cor. NW, Sec. 22-21-10 ..... Cmtd. 9-in. 3,500 ft.

WEBSTER PARISH—SAREPTA AND SHONGALOO

Donohoe O. & G. Co.'s No. 1-B W. B. Roseberry, 250 ft. S. 250 ft. E, C, Sec. 19-23-9 ..... Location.
Pat Hudson's No. 1 L. S. Gardner, 150 ft. E, 200 ft. S, NW cor. SW NE, Sec. 1-22-11 ..... W.O.S.R; 1,500 ft.- oil; 6-ft. sand; T.D. 2,743 ft.
Pat Hudson's No. 2 S. Gardner, 330 ft. N, 300 ft. E, C, Sec. 1-22-11 ..... Drilling.
Pat Hudson's No. 1 B. L. Slack, 330 ft. W, 330 ft. N, SE cor. SW, Sec. 36-23-11 ..... Location.
F. E. Estes' No. 2 Pardee, 1,270 ft. W, 50 ft. S, NE cor. NW, Sec. 3-22-11 ..... Cored sandy lime 2,654 ft.
Magnolia Pet. Co.'s No. 1 C. O. Bailey, 100 ft. N, 660 ft. E, SW cor. NW NE, Sec. 29-23-9 ..... Bailing to test 2,761 ft; T.D. 2,782 ft.
Magnolia Pet. Co.'s No. 1 N. T. Knight, 330 ft. S, 330 f.. E, NW cor. SE SE, Sec. 33-23-9 ..... W.O.S.R; 2,692 ft.
Magnolia Pet. Co.'s No. 2 Scroggins, 330 ft. S, 376 ft. E, NW cor. SW NW, Sec. 1-22-11 ..... W.O.S.R; 2,708 ft.
Sarepta Oil Co.'s No. 1 L. S. Gardner, 300 ft. S, 300 ft. W, C, Sec. 1-22-11 ..... Did not abd; moving in heavier rig; T.D. 2,681 ft.

ARKANSAS

JOHNSON COUNTY—CLARKSVILLE

Ark.-La. P. L. Co.'s No. 1 Patterson, 1,020 ft. S, 2,570 ft. E, NW cor., Sec. 14-10-24 ..... Derrick.

NEVADA COUNTY

Roy Davis et als' No. 1 Chas. Henry, 1,120 ft. N, 1,120 ft. W, SE cor., Sec. 10-12-20 ..... Derrick.
C. F. Steele's No. 1 E. W. Groves, Sec. 21-14-20 ..... Shut down.

OUACHITA COUNTY—SMACKOVER

J. E. Crosbie's No. 4 H. Primm, 300 ft. W, 250 ft. N, SE cor., Sec. 23-15-16 ..... Began drlg. Nov. 4; cmtd. 10-in. 43 ft; 6⅝-in. 1,977 ft; bailed; tested 43-ft. sand; T.D. 2,040 ft.
L. H. Hamilton's No. 1 Arnold & Doyle, SE SE, Sec. 23-15-16 ..... Standing 400 ft. in fluid; 23 ft. broken sand; T.D. 2,010 ft.

Marine Oil Co.'s No. 7-A Hays, Sec. 4-16-15 ..... W.O.S.R; 450 ft. oil; 20-ft. sand; T.D. 2,362 ft.

Oil Field Corp.'s No. 10 McKenzie, 265 ft. E, 185 ft. N, SW cor. SE NE, Sec. 36-15-16 ..... W.O.S.R; 2,002 ft.

Phillips Pet. Co.'s No. 3 Clayton, NE cor. NW NE, Sec. 34-15-15 ..... W.O.S.R; 350 ft. fluid in hole; 37-ft. broken sand; T.D. 2,036 ft.

Simms Oil Co.'s No. 4 Johnson, 330 ft. N, 85 ft. E, SW cor. NE SE, Sec. 34-15-15 ..... Arranging to deepen with tools 1,975 ft.

Simms Oil Co.'s No. 5 Johnson, 301 ft. N, 250 ft. W, SE cor. NE SE, Sec. 34-15-15 ..... Rig up; workover.

Southern Prod. Co.'s No. 1-A Watts, SW cor. SW SE, Sec. 27-15-15 ..... Cmtd. 6⅝-in. 2,029 ft; T.D. 2,034 ft; W.O.S.R; 2,052 ft.

Southern Prod. Co.'s No. 2-A Watts, NW cor. SW SE, Sec. 27-15-15 ..... Rig up.

Standard Oil Co.'s No. 13 Arnold, 200 ft. S, 200 ft. E, NW cor. NE NE, Sec. 26-15-16 ..... Cmtd. 10-in. 83 ft.

Standard Oil Co.'s No. 8 Powell, 200 ft. S, 200 ft. W, NE cor. SE NW, Sec. 34-15-15 ..... Cmtd. 6⅝-in. 1,959 ft; cmtd. 278 ft. of 4½-in. 1,978 ft; T.D. 2,017 ft; C.O. 2,015 ft.

Standard Oil Co.'s No. 9 Powell, Sec. 34-15-15 ..... Bailing to test 29-ft. sand; T.D. 2,000 ft.

J. D. Wingfield's No. 1 Martin, SW cor., Sec. 26-15-15 ... Set 6⅝-in. 2,085 ft; tested little oil and S.W; W.O; T.D. 2,115 ft.

OUACHITA COUNTY—STEPHENS

La. Oil Ref. Corp.'s No. 1 Green, 330 ft. S, 330 ft. E, NW cor., Sec. 22-15-19 ..... Cmtd. 6⅝-in. 2,494 ft.

UNION COUNTY—CHAMPAGNOLLE

Magnolia Pet. Co.'s No. 1 Schmidt, 300 ft. N, 300 ft. W, SE cor. NW SW, Sec. 5-17-14 ..... Tested 15,000,000 ft. dry gas 2,708-15 f.; cmtd. 8-in. 2,708 ft; tested 2,200,000 ft. gas 2,715 ft; coring 3,177 ft.

UNION COUNTY EL DORADO

Rice et als' No. 1 W. Ralty, 150 ft. S, 150 ft. E, NW cor. SW, Sec. 7-17-15 ..... Spudded July 18; cmtd. 10-in. at 92 ft.

Wilson & Chapman's No. 1 Thompson, 150 ft. N, 330 ft. W, SE cor. NW NW, Sec. 4-17-15 ..... Began drlg. Nov. 16; cmtd. 10-in. 110 ft.

UNION COUNTY—SMACKOVER

Ark. Fuel Oil Co.'s No. 5 Alphin, Sec. 11-16-16 ..... O.W.D.D; perforated csg. 1,960-70 ft; swbd. dry; filled up 40 ft. oil in hour; W.O.

Foster et als' No. 1 J. V. Spahr, 330 ft. S, 330 ft. W, NE cor. SE SW, Sec. 35-15-16 ..... Rig up.

E. M. Jones' No. 1 H. Murphy, 211 ft. S, 211 f.. E, NW cor. Lot 3, NW, Sec. 2-16-15 ..... W.O.S.R; 90 ft. fluid in hole; 17-ft. broken sand; T.D. 1,981 ft.

Lion Oil Ref. Co.'s No. 1 James, CWL, Lot 2, NW, Sec. 6-16-15 ..... Cmtd. 6⅝-in. 1,942 ft; drlg. in; bailing to test 58-ft. broken sand; pumping S.W. 2,018 f..

Root Refineries, Inc.'s No. 8 Calloway, 510 ft. S, 150 ft. W, NE cor., Sec. 4-16-15 ..... Began drlg. Nov. 12; cmtd. 10-in. 63 ft; drlg. 900 ft.

Skelly Oil Co.'s No. 3-A Alphin, 1,320 ft. S, C, Sec. 24-16-16 ..... Cmtd. 6⅝-in. 2,092 ft.

EAST TEXAS
PANOLA COUNTY

Ark.-La. P. L. Co.'s No. 3 Crenshaw, E. F. Mitcheson Sur. Began drlg. Nov. 7; drlg. 1,525 ft.

Ark.-La. P. L. Co.'s No. 8 Warner, Jas. Matthews Sur... Rig up.

S. H. Gardner's No. 5 Brumble, 5,966 ft. E, 4,132 ft. S, NW cor. B. C. Jordan Sur. ..... S.D. for wir; T.D. 1,000 ft.

S. H. Gardner's No. 4 Roquemore, 5,176 ft. E, 4,432 ft. S, NW cor. B. C. Jordan Sur. ..... Rigging up.

Magnolia Pet. Co.'s No. 1 M. Jernigan, 330 ft. N, 330 ft. W, SE cor. M. Jerigan tract in Jane Thorpe Sur. . Began drlg. Nov. 18; drlg. 156 ft.

Magnolia Pet. Co.'s No. 1 D. W. Scott, 640 ft. N, 660 ft. E, SW cor. Scott tract in S. Lawless Sur. ..... O.W.D.D; drlg. lime 2,760 f.; old T.D. 1,077 ft.

Magnolia Pet. Co.'s No. 5 G. C. Tiller, 1,114 ft. W, 303 ft. N, SE cor. Jane Thorpe Sur. ..... Tested 300,000 ft. gas 2,677 ft; coring shale and lime 2,802 ft.

Magnolia Pet. Co.'s No. 6 G. C. Tiller, 393 ft. S, 1,990 ft. E, NW cor. Jane Thorpe Sur. ..... Location.

Nat. Gas Prod. Co.'s No. 10 Roquemore, B. C. Jordan Sur. ..... Began drlg. Oct. 20; cmtd. 10-in. 42 ft.

Nat. Gas Prod. Co.'s No. 11 Roquemore, B. C. Jordan Sur. ..... Began drlg. Oct. 20; cmtd. 10-in. 42 ft; drlg. 620 ft.

Nemours Corp.'s No. 6 G. C. Tiller, 2,330 ft. S, 300 ft. W, NE cor. W. D. Matthews Sur. ..... Drlg. 2,150 ft.

The Texas Co.'s No. 3 G. W. Brumble, 1,085 f.. E, 330 ft. N, SW cor. John Womack Sur. ..... Rigging up.

WILDCAT OPERATIONS IN LOUISIANA-ARKANSAS

(Continued from Page 55)

Magnolia Pet. Co.'s No. 1 Anna Mason, 990 ft. S, 990 ft. E, NW cor. SW Sec. 27-12-11 ..... Coring hard shale 2,670 ft.

FRANKLIN PARISH

Davis et als' No. 1 Moore, 600 ft. W, 200 ft. S, NE cor. Sec. 12-11-6 ..... S.D. 1,430 ft.

Franklin Oil & Gas Co.'s No. 1 T. J. O'Brien, 300 ft. N, 300 ft. E, SW cor. NW Sec. 17-15-9 ..... Began drlg. Nov. 12; drlg. 100 ft.

MOREHOUSE PARISH

J. P. White's No. 1 Chess-Wymond, Sec. 32-19-6 ..... Tested S.W. 3,025 ft.; W.O.

Rainbow Oil Co.'s No. 1 Louisville Cooperage Co., 990 ft. S and E, NW cor. NE Sec. 33-22-8 ..... Derrick.

NATCHITOCHES PARISH

S. D. McDaniel's No. 2 Clark & Morse, 800 ft. E, 350 ft. N, C, Sec. 23-5-6 ..... Tested 1,000,000 ft. gas and S.W. 8 ft.; S.D. for orders; T.D. 2,536 ft.

Nichols & Wilder's No. 1 Clark, 150 f.. W, 250 ft. N, SE cor. Sec. 10-10-8 ..... Rigging up.

Robeline O. & G. Co.'s No. 1 Winn, Sec. 7-8-9 ..... Rigging up.

OUACHITA PARISH

J. L. Bullock, trustee's No. 1 West Va. Lbr. Co. N½ NE, Sec. 25-18-5 ..... Drlg. shale and boulders 2,236 ft.

RAPIDES PARISH

Ayers Bros.' No. 1 Wickliff, 2,790 ft. N, 150 ft. E, SW cor. Sec. 9-5n-2e ..... S.D. for water; T.D. 900 ft.

RED RIVER PARISH

W. D. Ball's No. 1 Krumholtz, 660 ft. S, 660 ft. S, NW cor. Sec. 32-14-10 ..... S.D. waiting orders 950 ft.

Benedum & Trees Oil Co.'s No. 1 Franklin Realty Co. 350 ft. E, 350 ft. S, NW cor. Sec. 29-11-9 ..... Coring 3,739 ft.

Eylers O. & G. Co.'s No. 4 Chaffraix, 150 ft. S, 170 ft. W, NE cor. SW SE Sec. 30-12-10 ..... S.D. 2,750 ft.

Eylers O. & G. Co.'s No. 1 Johnson, 500 ft. N, 500 ft. W, SE cor. SW Sec. 17-12-10 ..... Set 10-in. 203 ft.; S.D. 1,050 ft.

LeGrande et als' No. 1 Sample, Sec. 11-14-11 ..... Rigging up.

D. H. Riddick's No. 1 Johnson, 500 ft. N, 500 ft. W, SE cor. Sec. 17-12-10 ..... S.D. 1,050 ft.; laying gas line.

RICHLAND PARISH

J. T. Austin's No. 1 Singleterry, 1,980 ft. N, 660 ft. W, SE cor. Sec. 20-18-7 ..... Began drlg. Nov. 16; S.D. for fuel 30 ft.

Austin & McDonald's No. 1 Hunt, 594 ft. N, 660 ft. E, SW cor Section 13-17-5 ..... Derrick.

Austin & McDonald's No. 2 Millsaps, SW cor. Sec. 17-17-6. Waiting orders; T.D. 2,679 ft.

Austin & McDonald's No. 3 Millsaps, 1,980 ft. S, 660 ft. E, NW cor. Sec. 16-17-6 ..... Tested S.W.; W.O. 2,477 ft.

Austin & McDonald's No. 4 Millsaps, NW cor. Sec. 16-7-6.. Location.

Austin & McDonald's No. 5 Millsaps, 2,640 ft. N, 1,320 ft. W, SE cor. Sec. 8-17-6 ..... Derrick.

W. C. Feezel's No. 1 Landrum, 620 ft. N, 4,573 ft. E, SW cor. Sec. 6-16-7 ..... Location.

Industrial Gas Co.'s No. 1 T. R. Hodge, 3,259 ft. E, 1,320 ft. S, C, Sec. 7-16-7 ..... Drlg. 2,057 ft.

Industrial Gas Co.'s No. 1 A. T. Davidson, 1,856 ft S, 916 ft. E, NW cor. Sec. 6-16-7 ..... Cmtd. 6-in. 2,300 ft.

Industrial Gas Co.'s No. 1-A Jack Davidson, N 1degree W, 1,094 ft. S, 2,501 ft. E, NW cor. Sec. 6-16-7 ..... Drlg. 1,686 ft.

Industrial Gas Co.'s No. 1 Rus.on Drlg. Co., 1,980 ft. S, 1,955 ft. E, NW cor. Sec. 7-16-7 ..... Drlg. gumbo, 1,200 ft.

Palmer Corp.'s No. 2 Miles, 723 ft. E, 660 ft. S, NW cor. NE, Sec. 12-17-6 ..... Cmtd. 6-in. 2,315 ft.

Shreveport Contractors, Inc.,s No. 1 Buie, 600 ft. E, 400 ft. N, SW cor. Sec. 17-15-7 ..... O.W.O.D.; dry and abd. 1,946 ft. by Wilson and others; arranging cmt. 6-in. to test gas show 2,361 ft.

Triangle Drlg. Co. and Woodley Pet. Co.'s No. 1 G. L. Cumpton, 660 ft. S, 660 ft. W, NE cor. NW SE, Sec. 16-17-7 ..... Cmtd. 9-in. 1,000 ft.

Woodley Pet. Co.'s No. 1 Buie, 660 ft. N, 1,980 ft. E, SW cor. Sec. 32-18-7 ..... Began drlg. Nov. 14; cmtd. 12½-in. 201 ft.

SABINE PARISH

R. L. Gay's No. 1-A Bowman-Hicks, 900 ft. E, 200 ft. E, C, Sec. 34-8-12 ..... Cmtd. 8¼-in. 2,400 ft.; drlg 2,413 ft.

R. L. Gay's No. 5 Bowman-Hicks, 1,120 ft. W, 920 ft. N, SE cor. Sec. 14-7-14 ..... Drlg 2,450 ft.

R. L. Gay, trustee's No. 1 Long-Bell Lbr. Co.. NE cor. NW NW Sec. 26-8-14 ..... Drlg. 3,542 ft.

R. L. Gay, trustee's No. 2 Sabine Lbr. Co., Sec. 23-7-14.. Drlg 3,765 ft.

G. M. LeGrand's No. 1 A. C. Haley, 1,020 f.., 3,300 ft. E, NW cor. Sec. 6-7-12 ..... Derrick.

D. H. Riddick's No. 1 Scretchfield, 400 ft. E, 400 ft. N, SW cor. NW SE Sec. 18-9-12 ..... Rigging up.

Sabine O. & G. Co.'s No. 1 Anderson, 200 ft. N, 200 ft. E SW cor. SW NW Sec. 19-18-13 ..... Drlg. 1,865 ft.

A. H. Trevor's No. 1 Long-Bell, 330 ft. S, 330 ft. E, NW cor. SW NW Sec. 29-8-13 ..... Bailing liner, small show oil and gas; T.D. 3,625 ft.

UNION PARISH

Fred Stovall's No. 1 Stovall, 1,820 ft. E, 350 ft. N, SW cor. Sec. 32-23-4 ..... Rig up.

WEBSTER PARISH

F. M. Fuller's No. 1 Monzingo, 200 ft. N, 200 ft. W, SE cor. Sec. 27-18-8 ..... Began drlg. Nov. 10; cm d. 10-in. at 62 ft.; drlg. 600 ft.

Paul C. Warren et als' No. 1 Martin, 305 ft. N, 212 ft. E, SW cor. Sec. 20-20-9 ..... Drlg. 850 ft.

ARKANSAS
ASHLEY COUNTY

Ark. Fuel Oil Co.'s No. 1 Crossett Lbr. Co., 330 ft. E, 330 ft. S, NW cor. Sec. 1-19-7 ..... Rigging up.

J. G. Marcum, trustee's No. 1 McGarry, 300 ft. W, 100 ft. S, C Sec. 9-19-4 ..... Tested dry 3,300 ft.; W.O.

CLARK COUNTY

Wm. Henry, trustee's No. 1 Clark, Sec. 34-9-21 ..... S.D. 1,200 ft.

CLEBURN COUNTY

Cosden Oil Co.'s of Ark.'s No. 1 Donophan, 100 ft. S, 660 ft. E, NW cor. SW SE Sec. 19-9-10 ..... Began drlg. Nov. 10; drlg. 175 ft.

COLUMBIA COUNTY

Talbot & Markle's No. 1 Copeland, 300 ft. S, 300 ft. W, NE cor SE NW Sec. 31-19-19 ..... Drlg. hard lime 4,440 ft.

FAULKNER COUNTY

Gold Creek Oil & Gas Co.'s No. 2 Stermer, SE cor. NW SE Sec. 17-4-13 ..... Rigging up.

GARLAND COUNTY

Givens et als' No. 1 Garrett, 660 ft. S, 660 ft. W, C Sec. 1-3-19 ..... Began drlg. Aug. 10, 1926; hard sand 3,168-96 ft.; claims show gas; drlg.

GRANT COUNTY

Jones & Watkins' No. 1 Meek, Sec. 5-4-11 ..... S.D. 1,400 ft.

LITTLE RIVER COUNTY

A. L. Buck's No. 1 Greason, NW NW, Sec. 25-12-32 .... Drlg. 1,875 ft.

McDonald & Shaw's No. 1 W. E. Black, 240 ft. N, 450 ft. W, SE cor. SE NE Sec. 12-13-28 ..... S.D. 1,542 ft.

MADISON COUNTY

Phillips Pet. Co. and F. S. Craver's No. 1., C Sec. 11-14-28. Tested 250,000 ft. gas 63 ft.; drlg. sandy lime 1,300 ft.

MILLER COUNTY

E. B. Lenz et als' No. 1 Bossier Co., NW cor. Sec. 13-15-26. S.D. red beds 3,362 ft.

OUACHITA COUNTY

Artex Oil Co.'s No. 1 M. V. Smith, 330 ft. S, 330 ft. E, NW cor. SE NW, Sec. 31-15-17 ..... Rig up.

Copenhaven et als' No. 1 Warnick, Sec. 2-15-17 ..... S.D. 2,190 ft.

C. H. McDonald's No. 1 Fogle, Sec. 13-14-16 ..... S.D. 2,301 ft.; W.O.

Kobler & Erickson's No. 1 Rumph & Tyson, 300 ft. N, 300 ft. W, SE cor. Sec. 13-15-15 ..... Set 10-in. at 98 ft.

Pure Oil Co.'s No. 1 A. A. Wilson, 330 ft. N, 330 ft. W, SE cor. NW SW Sec. 26-15-18 ..... Rig up.

Wesson et als' No. 1 Booth, Sec. 12-15-19 ..... S.D. 2,203 ft.

POPE COUNTY

Cosden Oil Co.'s No. 1 Mo. Pac. R.R., 660 ft. N, 660 ft. E, SW cor. NW SE Sec. 13-9-9 ..... Rigging up.

Cosden Oil Co. of Ark.'s No. 1 Shackelford, 150 ft. E, 660 ft. S, NW cor. NW SE Sec. 13-9-19 ..... Lcation.

PRAIRIE COUNTY

Transcontinental Oil Co.'s No. 1 Louis Novak, 330 ft. E, 330 ft. N, SW cor. SW NE, Sec. 36-2n-6 ..... Cmtd. 8-in. 2,058 ft.; T.D. 2,060 ft.

M. W. Greeson's No. 1 C. S. Parke, 330 ft. N, 330 ft. W, SE cor. Sec. 21-8-24 ..... Lcation.

ST. FRANCIS COUNTY

Brownlee Drlg. Co.'s No. 1 Whitted, 110 ft. N, 110 ft. E, SW cor. SE NW Sec. 28-4-1 ..... Lcation.

UNION COUNTY

Addie & Modisette's No. 1 Union Sawmill, SW cor. SW SE Sec. 25-19-12 ..... Location.

Ark. Drlg. Co.'s No. 1 Norris, 150 ft. S, 150 ft. W, NE cor. SE SE Sec. 17-18-12 ..... Tested salt water 3,000 ft.; T.D 3,310 ft.

Sam Arrendale's No. 1 Gallagher & Nelson, 200 ft. N and W, SE cor. Lot 5, Sec. 18-18-17 ..... S.D. 2,268 ft.

W. M. Coates, trustee's No. 1 McDuffie, Sec. 32-19-17 .... Tested salt water 4,071 ft.; W.O.

O. W. Estes' No. 1 Felsenthal, 330 ft. S, 330 ft. W, NE cor. NE NW Sec. 2-18-15 ..... S.D.; W.O. 125 ft. oil and S.W. in hole; T.D. 2,191 ft.

Federal Pet. Co.'s No. 1 Union Sawmill fee, NW cor. NE SW Sec. 5-17-12 ..... Casing 2,953 ft.

Stark et als' No. 1 Ainsworth, NE cor. NW NE NE, Sec. 8-19-16 ..... Drlg. 1,100 ft.

T. J. Woodley's No. 1 First Natl. Bank, NW cor. Sec. 34-19-18 ..... Derrick.

VAN BUREN COUNTY

Glenn Cole et als, trustee's No. 1 Scanlan, 200 ft. S, 200 ft. W, NE cor. SE NW Sec. 5-19-13 ..... S.D. 50 ft.

WASHINGTON COUNTY

12-16-32 ..... Spudded Sept. 1928; S.D. 140 ft.; resumed drlg. Aug. 25; U.R.; T.D. 150 ft.

O'Hara & Shetterly's No. 1 Boyd, SE cor. SE NE, Sec. C. H. Willoughby's No. 1 Jones, Sec. 34-16-30 ..... Cmtd. 6-in. 1,320 ft.; S.D. 1,342 ft.

Lincoln Leaseholding Synd.'s No. 1 Lincoln, Sec. 30-15-32 ..... S.D. 1,040 ft.; repairs.

WHITE COUNTY

Letona Synd.'s No. 1 Letona, SE cor. NW SW Sec. 35-9-8. Drlg. black caving shale 3,430-3,500 ft.

EAST TEXAS

CAMP COUNTY

Rogers et als' No. 1 Enfelt, R. M. Montgomery Sur..... Tested dry 1,870 ft.; S.D., 1,920 ft.

RED RIVER COUNTY

D. M. Buffington's No. 1 Hossier, E. Hughhart Sur..... Drlg. 2,050 ft.
Shad Harper's No. 1 W. R. Garland, J. Wagley Sur..... S.D. 1,862 ft.
Johnson Pet. Co.'s No. 2 Randolph, Edward Dean Sur... S.D. 2,000 ft.

SHELBY COUNTY

Benedum & Trees Oil Co.'s No. 1 Pickering Lbr. Co. 300 ft. S, 300 ft. W, NE cor. Lot 20, D.T.F. Lordt Sur.. Setting 8-in. 2,862 ft.
Chapperall Oil Co.'s No. 2 Holt, Matthew Moore Sur.... S.D. for orders 3,004 ft.
Gulf Ref. Co.'s No. 2 Pickering, 463 ft. S, 29 ft. W, SW cor. P. W. Harvey Sur. in J. H. Patterson Sur..... Cored hard gray sand 3,267-76 ft.; bailing S.W.; can't get below 2,100 ft. from apex; T.D. 3,276 ft.

MISSISSIPPI

ALCORN COUNTY

Alcorn Pet. Co.'s No. 1 Matthews, SE cor. Sec. 14-2s-7e Drlg. 2,700 ft.

CHICKASAW COUNTY

Hightower & Golson's No. 1 Flemming, NE cor. Sec. 20-13-3 ..... Quicksand 1,240 ft.

HINDS COUNTY

Harry Gerson's No. 1 Edward House, Blk. 16, West Jackson Subd., City of Jackson, in Twp. 5n, Range 1e ..... Rig up.
Oscar Brown's No. 1 Riverside (formerly Hennessee et als') SE cor. SE SW Sec. 23-16-5 ..... Set 12½-in. 30 ft.; S.D. 1,050 ft.
Mrs. Reeder et als' No. 1 State, SE cor. NW NW Sec. 25-6-1e ..... S.D. 2,895 ft.
South Christian Institute's No. 1 fee, SE SW Sec. 29-6-4.. Waiting on csg. to set; T.D. 1,203 ft.

HUMPHREYS COUNTY

E. C. Steele et als' No. 1 C. B. Box, SE cor. SE NE Sec. 25-14-4w ..... Set 12½-in. 60 ft.; S.D.

LAUDERDALE COUNTY

Lauderdale O. & G. Co.'s No. 1 Lackey, 990 f.. S and E, NW cor. NE Sec. 2-7-16 ..... Cored sand, shale and gumbo 2,-494-2,500 ft.; S.D. 2,786 ft.
Meridian O. & G. Co.'s No. 1 Hauser, Sec. 33-8-18 ..... S.D.; gumbo 2,410 ft.
J. R. Smith Oil Co.'s No. 1 C. F. Craig, Sec. 2-6-14 .... Derrick.

LAFAYETTE COUNTY

Banks-Goode et als' No. 1 May, 113½ rods S, 26 rods E, NW cor. SW Sec. 22-10-1w ..... Derrick.

LINCOLN COUNTY

La.-Miss Oil Co.'s No. 1 Pat Case, NE NE Sec. 21-8-6 .. Spudded Feb. 17, 1929; S.D. 50 ft.; resumed drlg. Aug. 12; cm d. 12½-in. 368 ft.; S.D. salt water sand 1,213 ft.

MONROE COUNTY

Amory Dev. Co.'s No. 1 Bourland, Sec. 2-13-19 ..... S.D.; waiting for 5 3/16-in. csg. 2,580 ft.
Amory Pet. Co.'s No. 1 Hall, Sec. 8-13-19 ..... Fish. for liner and tools 3,045 ft.
Park Bowser et als' No. 1 Cowart, second hole, Sec. 2-12-19 ..... S.D. 30 ft.

RANKIN COUNTY

Home Oil Prod. Co.'s No. 1 E. P. Rainey, NW NW Sec. 13-5-1e ..... Claim show gas 2,912 ft.; recmtd. 10-in. casing for test.

WARREN COUNTY

El Dorado Oil Co.'s No. 1 Dornbush, Sec. 8-18-5 .... Drlg. 2,400 ft.

YALOBUSHA COUNTY

Phillip Bros.' No. 1 James, Sec. 20-11-5 ..... Coring 3,420 ft.
Carter Oil Co. and J. D. Collett's No. 1 Blackmur, 330 ft. S, 990 ft. W, C Sec. 14-11-4 ..... Rigging up.

YAZOO COUNTY

Amerada Pet. Co.'s No. 1 Doherty, SW SW Sec. 24-12-2.. Location.

TENNESSEE

DECATUR COUNTY

Chester County Oil Co.'s No. 1 Montgomery ..... Cmtd. 6-in. 1,040 ft.; drlg. hard gray lime 1,165 ft.

ALABAMA

CHOCTAW COUNTY

Robinson & Greer's No. 1 Douglas Oil Co., 320 ft. N, C Sec. 15-19-2 ..... Coring 3,400 ft.

LAMAR COUNTY

Briggs & Knapp's No. 1 Wefel, Sec. 25-12-14 ..... Reaming to bottom; T.D. 1,180 ft.

MARION COUNTY

Hobson and others' No. 1 John Clark, SE Sec. 29-11-14.. Drk. pattern.

SUMTER COUNTY

B. W. Bates' No. 1 fee, Sec. 3-18-1 ..... U.R. surface csg. at 300 ft.; to set 6-in.

WASHINGTON COUNTY

S. A. Hobson's No. 1 Hobson Bros., Sec. 9-8-2 ..... S.D.; S.W. flow at 1,450 ft.
S. A. Hobson's No. 1 Wilson, Sec. 27-7-1 ..... S.D. 700 ft.

WILDCAT OPERATIONS IN SOUTHWEST TEXAS

(Continued from Page 60)

DE WITT COUNTY

Gibson & McIntyre's No. 1 Wm. Van Roeder ..... S. D.; in gumbo at 1,440 ft.
F. P. Zoch's No. 1 Steinman, John Garelli Sur., 976 ft. from SW line, 1,797 ft. from NW line ..... Location.
H. T. Roe's No. 1 Leinhardt ..... Drlg. 1,630 ft. in gumbo.

DIMMITT COUNTY

Texas Fuel Gas Co.'s No. 1 City Nat'l Bank (Laxon) ... Setting csg. at 680 ft.
Texas Fuel Gas Co.'s No. 1 E. R. Hagest, Sur No. 271, Carrizo Springs ..... T. D. 1,425 ft.; setting csg; test has shown some gas and rainbows of oil.

DUVAL COUNTY

Trussell & Partee's No. 1 E. R. Hagest, Sur. No. 271, Blk. 7, 450 ft. E line, 150 ft. S line ..... Drlg. 2,260 ft.
National Oil Co.'s No. 2 Ball, Agua Poquita Sur., Blk. 3.. Drlg. 1,500 ft.
F. P. Toch's No. 1 King, Blk. 25, Hoffman Smith subd. W. R. King ranch, Dugo Hinijosa grant, 660 ft. N line, 660 ft. E line ..... Location.
Southern Oil Co.'s No. 1 Welder Ward, Sur. 215 ..... T. D. 750 ft.; standing, waiting on water.

EDWARDS COUNTY

A. M. Griffith's No. 1 Wardlaw ..... Shut down 3,000 ft. awaiting orders; expect to drill deeper.

FAYETTE COUNTY

Muldoon Oil & Gas Co.'s No. 1 Kemp, M. Smith League .. Drlg. 1,000 ft.
W. J. Kelly's No. 1 Burke ..... Shut down 1,000 ft.

FRIO COUNTY

Frank B. LeFeure's No. 1 H. W. and R. L. Eschenburg, Edward Galligher Sur. No. 789, 3,980 ft. W of SE cor. of Edward Galligher Sur. No. 788 and 1,320 ft. S of N line of Edward Galligher Sur. No. 789 ..... To start rigging up soon.

GOLIAD COUNTY

Compton Oil Co.'s No. 1 Fromme, Dexter Survey..... Standing.
Humble Oil & Refg. Co.'s No. 1-A Spangle ..... T. D. 1,037 ft.; completed and abandoned in shale.
F. P. Zoch's No. 1 Kaufman ..... T. D. 3,217 ft.; drlg. in shale.
Mission Drlg. Co.'s No. 3 Ray, 3 miles E of No. 2. T. D. 4,100 ft.; bailed salt water at 4,100 ft.
Western Union Oil Co.'s No. 1 Lucas, Juan Moya Delgado Sur. ..... T. D. 725 ft.; installing heavy rig; test taken over by Mission Drilling Co.

GONZALES COUNTY

Acme Oil & Royalty Corp.'s No. 1 Weber, Thomas Wright Survey ..... T. D.; drlg. in shale at 1,430 ft.
Joyce & Stephens' No. 1 Taylor, in city limits of Waelder ..... T. D. 600 ft.; set casing.
Dunning & Pierce's No. 1 Stahl, Sarah Hendricks Sur., 150 ft. to SE and NE lines of farms ..... Location.
Cranfill & Reynolds' No. 1 F. J. Lang, James Rodney Sur., 450 ft. from N line, 450 ft. from E line ..... T. D. 3,120 ft.; drlg.
Adams & Lyles' No. 1 Jackson Sur. ..... Shut down 800 ft.
Joe Bruner's No. 1 R. D. and J. C. Miller ..... T. D. 3,350 ft. in shale; drlg.
Linderman Bros.' No. 2 F. H. Frampton in Richard Heath Sur. ..... Skidded rig 40 ft. from No. 1.
Finnell & Elam's No. 1 Robinson, Liverpool Sur. ..... Shut down 1,720 ft.
Hoffman et al's No. 1 Borrer, J. Stewart Sur ..... Drlg. 1,025 ft.
Marshall & Moore's No. 1 St. Clair, R. H. Wymn Sur. .... T. D. 1,700 ft.; to resume drlg. soon.
United North & South's No. 1 J. A. Kerr, in James Bowman Sur., 150 ft. S of CNL of tract, 11 miles W from Waelder ..... Making location.
United North & South Dev. Co.'s No. 1 J. E. Preston 120 acres, John Oetkins Sur., 1,350 ft. to S line, 750 ft. of W line ..... T. D. 1,750 ft.; drlg. in sand and shale.
L. L. Jones' No. 1 J. F. Kindred, W. W. Barnes Sur., 700 ft. W line, 1,000 ft. S line ..... Location.
J. H. Burt et al's No. 1 E. Menking, Blk. 24, 150 ft. to N and 450 ft. to E line of Blk. 24, 14,050 ft. to NW and NE line of Sur. ..... Rigging up.
A. G. Keiffer's No. 1 B. B. Dix ..... T. D. 2,785 ft.; changing crews.

GUADALUPE COUNTY

H. H. Weinert's No. 1 A. E. Dowdy, J. C. Darst Sur., 110 ft. S line, 36 ft. E line ..... Location.
H. H. Weinert's No. 2 A. E. Dowdy, J. C. Darst Sur., 100 ft. N line, 36 ft. E line ..... Location.
J. O. Dore's No. 1 Appling, H. Cottlebur ..... Completed water well and fired up to start drlg. for oil.
Grayburg Oil Co.'s No. 1 Wells, Jose La Baume ..... T. D. 3,764 ft.; coring broken lime rock.
Pagenkopf & Kennon's No. 1 Halm, Joseph Kent Sur., 5 miles E of Seguin ..... T. D. 1,630 ft.; drlg. plug.
T. H. Poole et al's No. 1 F. Behring, Green DeWitt Sur. ..... P. B. about 10 ft. and will bail again; T. D. 2,356 ft.
Adams-Lyles-Walton's No. 1 Zoberoski, Jesus Cantu Sur.. Corrected depth 963 ft.; standing.

HAYS COUNTY

E. A. Bucklin's No. 1 A. Elsner ..... T. D. 725 ft.; taken over by Chas. Bell and associates; about to resume drilling.
J. A. Lang's No. 1 W. G. Barber, 7 miles SE from Buda.. T. D. 500 ft.; drlg. in chalk.

JACKSON COUNTY

Wright Bros.' No. 7 Drushell ..... Standing 2,375 ft.

JIM HOGG COUNTY

T. J. Conway's No. 2 Palacious Sur. 232, Blk. 10 ..... Drlg. 400 ft.
T. J. Conway's No. 4 Leyendecker, Blk. 9, Sur. 234, 150 ft. S line, 150 ft. E line ..... Drlg. 2,100 ft.
Deep Rock Oil Co.'s No. 1 Kelsey ..... Standing 2,510 ft.
L. M. Holden's No. 4 Jones, 1,320 ft. to north line, 1,320 ft. to east line of 160 acres out of Share 5 "A" Dego Hinojosa Grant ..... Standing 42 ft.

JIM WELLS COUNTY

G. W. Ogden's No. 1 G. Farris, M. Peres Sur. ..... T. D. 2,404 ft.; washing to bottom to drill deeper.

KARNES COUNTY

Ruby & Claypool's No. 1 Tom, V. Zepeda Sur., 850 ft. N line, 1,500 ft. E line ..... Shut down 1,150 ft.
Benedum-Trees' No. 1 S. E. Crewa, Britton Odem Sur. .... T. D. 3,625 ft.; drlg. in Cork Mountain.
Hurador Oil Co.'s No. 1 W. E. Porter ..... T. D. 2,758 ft.; drlg. in hard sand.

KERR COUNTY

L. R. Page and associates' No. 1 Real ..... T. D. 4,500 ft.; drlg. below 4,500 ft.
O. E. Tunstill et al's No. 1 Love Ranch, 2 miles E of Real County line, 3 miles N of Bandera County line ..... Moving in rig.

KENDALL COUNTY

Borgett et al's No. 1 Haag, W. Avery Sur. ..... Completed straight reaming; now replacing spudder with cable tool rig and building derrick.

KLEBERG COUNTY

Bowen-Sarles' No. 1 Robert H. Simmons, Sec. 7, King subd. 3 miles W from Ricadro ..... Derrick up; moving in rig.

KINNEY COUNTY

Lloyd Oil Co.'s No. 1 G. B. Moore, Survey 117 ..... T. D. 2,680 ft.; drlg. in shale and shells.

LIVE OAK COUNTY

O'Neil & Catlett No. 1 Smith, 900 ft. SW line, 150 ft. NW line ..... Drlg. in broken shale at 2,665 ft.
Dr. J. K. Rowan Co.'s No. 1 Lynne Ranch, 171 ft. W of George West ..... Location.
Simmons Oil Co. No. 1 Richard Coquat in Jas. C. Hill survey 2,250 ft. to S. line 1,750 ft. to E. line. 7 miles NE of Oakville ..... Drlg. in shale at 800 ft.

MAVERICK COUNTY

Rycade Oil Corp.'s No. 4 J. M. Chittim ..... T. D. 5,560 ft.; setting csg.
Rycade Oil Corp.'s No. 5 Chittim ..... Drlg. 1,500 ft.; ready to resume.
Rycade Oil Co.'s No. 3 Chittim, Blk. 7, Sur. 116, I.&G.N. 175 ft. N of No. 1, 10 ft. W, 255 ft. S line ..... T. D. 5,791 ft.; drilling.
The Texas Company, 5 miles west Darling Switch ..... T. D. 3,850 ft. in brown lime; to set csg.

MEDINA COUNTY

Pan American Petroleum Co.'s No. 1 Harrison, Sur. 799 .. Rigging up.
Pat Armstrong's No. 1 C. W. Butts in George C. Hanson Sur. ..... Drlg. 620 ft.
Donaldson Oil & Dev. Co.'s No. 2 Adams Co., James Hillemmeyer No. 25 Sur., 500 ft. to E line of Sur., 150 ft. to S line of N half of Sur. ..... Derrick timbers on ground.
Peters et al's No. 1 Noonan, J. N. Alsbury Sur. ..... T. D. 1,580 ft.; abandoned; dry.
Cecil Switzer's No. 1 Zen, 6 miles west of Hondo..... Fishing 3,487 ft.
R. C. Hill's No. 1 A. Wuezbach, G. Areola Sur., 500 ft. E line, 600 ft. S line ..... Location.
Carl Brothers' No. 1 Saathoff, A. Smelzer No. 19 Sur.. T. D. 910 ft.; taken over by Carl Bros. from A. W. Skogland; shut down.

MILAM COUNTY

Service Oil & Gas Co.'s No. 1 Muldrow, L. Taylor Sur., SE cor. ..... Location.
E. L. Chapman's No. 2 Johnson, J. J. Acosta Sur. ..... 3,100 ft. hot sulphur water in Edwards.
I. P. Sessions' No. 7 J. Bauer, T. J. Chambers Sur. .... Location.
E. L. Chapman's No. 1 Holman in J. J. Liendo Survey.... Drlg. 2,015 ft.
Michalk & Clark's No. 1 J. M. Gilchrist, J. J. Acosta Sur., 500 ft. to S line, 150 ft. to W line of farm .... T. D. 1,150 ft.; drlg. in Taylor marl.
Noack-McCarmack's No. 1 D. D. Fowler ..... T. D. 1,838 ft.; fishing for tools.
Diggs and others' No. 1 Nolen ..... Derrick.
Hill & Bonwell's No. 1 B. Booker, James Welch Sur. .... Fishing 2,020 ft.
Lloyd Oil Corp.'s No. 1 San Clement, Fokes Sur. ..... Spudded in.
A. H. Wray's No. 1 D. D. Fowler ..... Drlg. 964 ft. in sandy shale; had odor of gas at 955 ft.

McMULLEN COUNTY

Sun Oil Co.'s No. 1 Berry, J. Poitenent Sur. No. 9 ..... T. D. 1,050 ft.; coring entire depth using Elliott core barrels; samples taken every 5 ft.
Cowboys Oil Co.'s No. 1 Shiner, H. M. Brewer Sur. ..... T. D. 2,280 ft.; tested salt water and little gas 2,255-77; now drilling.

NUECES COUNTY

Nueces River Basin Dev. Co.'s No. 1 F. C. Allen ..... Trying to fish with csg. collapsed near top of hole. T. D. 3,940 ft.

H. Grimm et al's No. 1 A. R. Roberts, Blk. 79, Winter Vegt. Garden Subdivision, 6 miles NW of Robstown, 12 miles NE Agua Dulce Field ..... T. D. 1803 ft.; topped Gray sand; will test.
Trinity Drillers and Sun Co.'s No. 1 Tompkins ..... T. D. 3,945 ft. shale.

SAN PATRICIO COUNTY

LaFeria Oil & Gas Co.'s No. 1 C. C. Smith in J. C. White Survey, 690 ft. to north line, 350 ft. to east line .... Drlg. in shale at 1,520 ft.

STARR COUNTY

The Texas Company's No. 4-A V. G. Guerra, Porcion 67, Share 305-D ..... Drlg. 3,600 ft.
Smith & Adams' No. 1 Welch, Pedernal Sur. ..... Drlg. 600 ft.

WEBB COUNTY

Everett Suladie's No. 1 Bruni Sur. 131, 150 ft. S line, 150 ft. W line of NW of SE ..... Rigging up.

UVALDE COUNTY

Waldrop & Welch's No. 1 H. S. Benson, 2 miles northwest of Uvalde ..... T. D. 580 ft.; setting 8¼-inch csg.; hole making small amt. gas.
Phantom Oil Co.'s No. 1 Claudt Sur. 661 ..... Moving in machinery.

WILSON COUNTY

R. M. Sherer's No. 1 Tummilson, A. Trevena Sur. ..... 457 ft.; standing.
Tidal Oil Co.'s No. 1 Felix Kulesza, Susanna Larrison Sur., 235 ft. to E line, 1,320 ft. to S line of 647-acre tract ..... Derrick up; drlg. water well.
Trinity Drillers' No. 1 Richter in Trevino Sur., 3,005 ft. to E line, 250 ft. to N line of 58-ac. lease ..... Rigging up.
Rycade Oil Corp. et al's No. 1 George Hice, Juan Delgado Sur., 650 ft. W of Cibolo River, 150 ft. SE line of tract ..... Location.
Grayburg Oil Co.'s No. 1 Tigler, Parrot Sur. ..... T. D. 3,396 ft.; temp. shut down
R. M. Sherer's No. 1 First State Bank of Stockdale, Moran Sur. ..... 220 ft.; standing.

ZAPATA COUNTY

R. F. Blankenship's No. 1 G. T. Montemeyer, Sur. 45, Blk. 7, 150 ft. N & E lines ..... T. D. 1,280 ft.; drlg.
Magnolia Pet. Co.'s No. 2 F. G. Martinez Sur. No. 6, 660 ft. to N line, 660 ft. to E line ..... Drlg.; T. D. 1,325 ft.; drlg.; set 12½-inch csg. at 342 ft.
O. W. Killam's No. 1 J. G. Martinez Sur No. 2, 550 ft. W line, 150 ft. S line of SE of Sur. ..... Rigging up.
Magnolia Pet. Co.'s No. 3 F. G. Martinez Sur. No. 6, 660 ft. N line, 660 ft. E line of W half of Sur. ..... T. D. 475 ft.; drlg.; set 12½-inch csg. at 99 ft.
John Pappas' No. 2 Cuellar, Por. 33 and 34 ..... Drlg. 1,535 ft.
Hill et al's No. 1 A. O. de Vela, Blk. 30, El Grullo Sur. ..... T. D. 1,048 ft.; set csg. at 1,045 ft.; sand at 1,045-48; tested fresh water, abandoned.
Shell Pet. Co.'s No. 2 Lopez, Blk. 11, Sur. 288, 600 ft. NW line, 600 ft. SW line ..... Drlg. 875 ft.
National Oil Co.'s No. 1 D. B. Adams ..... Standing 670 ft.; showing some gas; waiting on water.
Marts & Beavens' No. 1 Trevino, Blk. 2, Porcions 2 and 3, Sur. 1, 150 ft. SE line and SW line ..... Drlg. 2,275 ft.

ZAVALA COUNTY

Tritex Oil Co.'s No. 1 Clay Burns ..... T. D. 780 ft.; standing.
Chicago Merchants Produce Co.'s No. 1 fee. 1 mile E of La Pryor ..... Drlg. 1,000 ft.
Tritex Oil Co.'s No. 2 Childress, one-fourth mile NW of old Dominion Co.'s No. 1 Pryor ..... Drlg. 650 ft.

GULF COAST FIELDS AND WILDCATS

(Continued from Page 50)

Humble & Valley's No. 10-B Deutrich ..... Drlg. shale 3,168 ft.
Humble & Valley's No. 11-B Deutrich ..... Derrick
Humble & Valley's No. 4 Woodley ..... Derrick.
Humble & Valley's No. 5 Woodley ..... Derrick.
Humble & Valley's No. 6 Woodley ..... Derrick
Humble & Valley's No. 5-B Grawunder ..... Derrick.
Humble & Valley's No. 6-B Grawunder ..... Drlg. sticky shale and lime 2,830 ft.
Humble & Valley's No. 7-B Grawunder ..... Drlg. sandy shale 2,632 ft.
Humble & Valley's No. 10-B Grawunder ..... Derrick.
Humble & Valley's No. 4-C Grawunder ..... Drlg. sticky shale 2,366 ft.
Humble & Valley's No. 3 Helmuth ..... Derrick
Humble & Valley's No. 3 Jackson ..... Derrick
Humble & Valleys No. 1-B Machamehl ..... Derrick
Humble & Valley's No. 6 Urban ..... Cleaning up after blowout and fire 3,086 ft.
Humble & Valley's No. 7 Urban ..... Derrick.
Humble & Valley's No. 8 Urban ..... Location.
Humble & Valley's No. 5 Saunders ..... Derrick.
Humble & Valley's No. 6 Mueller ..... Cmtd. casing to test sand 3,205 ft
Humble & Valley's No. 7 Mueller ..... Drlg. shale 2,250 ft.
Humble & Valley's No. 8 Mueller ..... Derrick
Humble & Valley's No. 4-A Bracey ..... Drlg shale 3,450 ft.
Humble & Valley's No. 5-A Bracey ..... Drlg. shale 3,175 ft.
Humble & Valley's No. 6-A Bracey ..... Location.
Humble & Valley's No. 3 Ollie Wilson ..... Cmtd. 6⅝-inch casing 3,106 ft total depth 3,257 ft.
Humble & Valley's No. 5 Gotosky ..... Comp. flowing 500 bbls. oil 3,318 ft.
Humble & Valley's No. 6 Gotosky ..... Rig
Humble & Valley's No. 3 Sherrill ..... Drlg. shale and lime 2,727 ft.
Humble & Valley's No. 1 Duncan, State land ..... Rig
Humble & Valley's No. 5 Thompson ..... Cmtd. casing to test sandy shale 3,195 ft.
Humble & Valley's No. 6 Thompson ..... Derrick
Humble & Valley's No. 4 Payne ..... Rig
Humble & Valley's No. 5 Payne ..... Derrick
Humble & Valley's No. 6 Payne ..... Derrick
Humble & Valley's No. 3-A Washington ..... Derrick

DE WALT—FORT BEND COUNTY

Humble Oil & Refining Co.'s No. 11 Brazos ..... Derrick
Humble Oil & Refining Co.'s No. 12 Brazos ..... Location
Humble Oil & Refg. Co.'s No. 9 Camp ..... Drlg. hard sand and lime 961 ft.
Humble Oil & Refg. Co.'s No. 8 Hamner ..... Drlg. sticky shale 3,126 ft.
Humble Oil & Refg. Co.'s No. 10 Sugarland (workover) ... Rigging up to deepen.
Humble Oil & Refg. Co.'s No. 11 Sugarland ..... Drlg. gumbo 1,501 ft.
Humble Oil & Refg. Co.'s No. 12 Sugarland ..... Rigging up to pump 3,785 ft.
Humble Oil & Refg. Co.'s No. 13 Sugarland ..... Rig.
Humble Oil & Refining Co.'s No. 2-B Sugarland ..... Rig
Humble Oil & Refg. Co.'s No. 7 Nelson ..... Drlg. shale 3,440 ft.
Humble Oil & Refg. Co.'s No. 1-C Bankers Mortgage ..... Set 311 ft. screen 3,651 ft; comp flowing 850 bbls. oil; total depth 3,673 ft.

HUMBLE—HARRIS COUNTY

Continental Oil Co.'s No. 1 Cezeaux, south side ..... Shut down, total depth 4,520 ft
Gardner Oil Co.'s No. 1 Perkins ..... Sandy shale 2,019 ft. Wait casing
Humble Oil & Refg. Co.'s No. 6 Williams ..... Drlg. sand and boulders 1,426 ft.
Humble Oil & Refg. Co.'s No. 7 Williams (south) ..... Drlg. sticky shale 4,870 ft.
Humble Oil & Refg. Co.'s No. 8 Williams (south) ..... Rig
Humble Oil & Refg. Co.'s No. 9 Williams, south ..... Rig
Humble Oil & Refg. Co.'s No. 10 Williams (south) ..... Rig
Humble Oil & Refg. Co.'s No. 1 Glass, south ..... Drlg. sticky shale 7,006 ft.
Humble Oil & Refg. Co.'s No. 1 Oates ..... Drlg. sandy shale 5,329 ft.
Humble Oil & Refg. Co.'s No. 1 Trahon ..... Set 414 ft. screen 5,049 ft.; comp. flowing estimated 2,400 bbls pipe line oil.
Harvey Smith et al's No. 3 Ward ..... To set casing to test sandy shale showing oil 4,356 ft.
Morris Investment Co.'s No. 1 fee ..... Preparing to test oil sand 1,407 ft.
South Texas Petroleum Co.'s No. 12 Morris (south) ..... Drlg. sticky shale 4,665 ft.
South Texas Petroleum Co.'s No. 13 Morris (south) ..... Drlg. sand and boulders 524 ft.
Sun Oil Co.'s No. 2 Bender (northwest) ..... Drlg. shale and lime 2,626 ft.
The Texas Company's No. 2 Dunman, south side ..... Rig
The Texas Company's No. 3 Dunman, south side ..... Derrick.
The Texas Company's No. 41 Stevenson (south) ..... Drlg. shale 4,527 ft.
The Texas Company's No. 23 House ..... Sidetracking 3,880 ft; Total depth in salt 5,072 ft.
West Production Co.'s No. 2 Foster ..... Rig.

BLUE RIDGE—FORT BEND COUNTY

Cunningham Prod. Co.'s No. 6 Blakely (workover) ..... Drlg. 2,641 ft.
Sinclair Oil & Gas Co.'s No. 5 Davidson (workover) ..... Drlg. 4,321 ft.
So. Texas Petroleum Co.'s No. 5 Blakely ..... Tested dry 3,447 ft; drlg. deeper 3,467 ft.

PIERCE JUNCTION—HARRIS COUNTY

Anderson & Plummer's No. 6 Whitehead (workover) .... Core sand 4,644 ft.
Gulf Production Co.'s No. 31 Taylor ..... Rig
Navarro Oil Co.-Texas Exploration Co.'s No. 17 Dooley ... Set 44 ft. screen 4,604 ft; swabbed some oil to deepen.
Navarro Oil Co.-Humble's No. 5 Dooley ..... Comp. flowing 2,000 bbls. fluid 200 bbls. oil at 4,592 ft.
Rio Bravo Oil Co.'s No. 11-B Settegast ..... Drlg. gummy shale 3,300 ft.
Rio Bravo Oil Co.'s No. 16-A Settegast, west ..... Cmtd 6⅝-inch casing 4,185 ft; to test oil sand 4,215 ft.
Rio Bravo Oil Co.'s No. 17-A Settegast, west ..... Drlg lime and gumbo 3,472 ft.
Saxet Gas Co.'s No. 5 Herman (southwest) ..... Drlg. sand 3,629 ft.
Saxet Gas Co.'s No. 6 Herman, southwest ..... Drlg. gumbo 961 ft.
Saxet Gas Co.'s No. 7 Herman, southwest ..... Derrick.
Superior Oil Co.'s No. 3 B. Whitehead (workover) ..... Drlg. 4,693 ft.
Superior Oil Corp.'s No. 2 Herman, southwest ..... Location.
J. F. Barron's No. 3 Fitzsimmons ..... Derrick.
Shaw & Texas Exploration Co.'s No. 2-F Fitzsimmons .. Derrick.
Shaw et al's No. 4-E Fitzsimmons ..... Drlg. shale and lime 3,957 ft.
Smith & Plummer's No. 1 Settegast ..... Drlg. gumbo 4,921 ft.

LIBERTY—LIBERTY COUNTY

Abercrombie & Harrison's No. 4 fee (workover) ..... Set strainer 3,549 ft.
Empire Gas & Fuel Co.'s No. 9 Groggan ..... Drlg. 981 ft.
Empire Gas & Fuel Co.'s No. 10 Groggan ..... Rigging
Sun Oil Co.'s No. 52 Mitchell ..... Drlg. sandy shale 3,102 ft.
Sun Oil Co.'s No. 53 Mitchell ..... Drlg. 3,117 ft.
The Texas Company's No. 5 Green (workover) ..... Testing oil sand 3,290 ft.
Yount Lee Oil Co.'s No. 19 Mitchell ..... Comp. pumping 120 bbls. fluid, 20 per cent b. s. and water 3,559 ft.

HULL—LIBERTY COUNTY

Empire Gas & Fuel Co.'s No. 30 Barngrover ..... Drlg. 1,279 ft.
W. B. Flynn's No. 8 Harrison (workover) ..... Drlg. 2,912 ft.
Gulf Production Co.'s No. 50 Phoenix (workover) ..... Drlg. 3,760 ft.
Gulf Production Co.'s No. 76 Phoenix (workover) ..... Drlg. 3,296 ft.
Houston Production Co.'s No. 14 Barngrover ..... Location.
Humble Oil & Refg. Co.'s No. 12 Hooks-Spell ..... Drlg. shale 3,596 ft.
Ocean Springs Oil Co.'s No. 1-H Palmer ..... Drlg. 507 ft.
Republic Production Co.'s No. 76 Dolbear (workover) ..... Drlg. deeper 3,058 ft.
Republic Production Co.'s No. 128 Dolbear (workover) .. Comp. pumping 350 bbls. oil 2,428 ft.
Republic Production Co.'s No. 132 Dolbear (workover) ... Drlg. 621 ft.
The Texas Company's No. 7 Hannah-Vacuum (workover) ... To deepen.
The Texas Company's No. 8 Hannah-Vacuum ..... Derrick.

BIG CREEK—FORT BEND COUNTY

Benedum & Trees' No. 1 J. F. Ahlers ..... Derrick.
Benedum & Trees' No. 1 Moore ..... Drlg. heaving shale 4,112 ft.
Gulf Production Co.'s No. 45 Davis (workover) ..... To deepen.
Gulf Production Co.'s No. 57 Davis ..... Drlg. sand and shale 3,882 ft.
The Texas Company's No. 3 fee (old well) ..... Drlg. 4,378 ft.

LOST LAKE—CHAMBERS COUNTY

Pure Oil Co.'s No. 4 Mayes ..... Core sand and shale 3,940 ft.
Pure Oil Co.'s No. 5 Mayes ..... Pulling screen to deepen 2,648 ft.
Pure Oil Co.'s No. 6-A Mayes ..... Drlg. hard lime and rock 937 ft.
Pure Oil Co.'s No. 7 Mayes ..... Trying to make drill stem test 2,840 ft.
Pure Oil Co.'s No. 8 Mayes ..... Trying to make drill stem test sand 2,442-54 ft.
Pure Oil Co.'s No. 3 Lost Lake ..... Drlg. sand rock 4,090 ft.

NASH—BRAZORIA COUNTY

Rycade Oil Corp.'s No. 26 Wisdom ..... Drlg. plug to test hard sand.

BATSON—HARDIN COUNTY

Ada Belle Oil Co.'s No. 130 Carlton ..... Drlg. 704 ft.
B. O. Poole's No. 2 Paraffin ..... Comp. pumping 7 bbls. net oil 917 ft.
Paraffine Oil Co.'s No. 80 Paraffine ..... Comp. pumping 10 bbls. net oil 469 ft.
Paraffine Oil Co.'s No. 81 Paraffine ..... Location.

SOUR LAKE—HARDIN COUNTY

Austin et al's No. 1 Watson ..... Drlg. 143 ft.
Lake View Oil Co.'s No. 8 Minor ..... Rig.
Gilbert Oil Co.'s No. 107 Gilbert ..... Rigging up.
M. E. Peveto Oil Co.'s No. 1 Cannon ..... To pump 1,311 ft.
The Texas Company's No. 305 fee ..... Location.

SARATOGA—HARDIN COUNTY

Paggi et al's No. 5 Queen City ..... Drlg. 1,123 ft.
Rio Bravo Oil Co.'s No. 78 Cotton ..... Comp. pumping 40 bbls. oil 533 ft.
Rio Bravo Oil Co.'s No. 86 Cotton ..... Spudded.

ORANGE—ORANGE COUNTY

Brownie Babbett Oil Co.'s No. 8 McLean (workover) ... Comp. pumping 125 bbls. oil 3,612 ft.
Tillery Oil Co.'s No. 3-B State (workover) ..... Comp. flowing 630 bbls. oil 3,509 ft.

GOOSE CREEK—HARRIS COUNTY

Cedar Bayou Oil Co.'s No. 11 Busch ..... Testing oil sand 2,611 ft.
Russell Ferrell's No. 4 Gillette (workover) ..... Pulling screen to deepen.
Humble Oil & Refg. Co.'s No. 19 Ashbell-Smith ..... Testing oil sand 2,479 ft.
Humble Oil & Refg. Co.'s No. 76 Simms-Smith ..... Reaming 4,753 ft.
Lake Shore Oil Co.'s No. 4 Duke ..... Shut down 2,594 ft.
J. M. West, trustee, No. 3 Scorrega ..... Drlg. 3,512 ft.

SPINDLETOP—JEFFERSON COUNTY

Yount Lee Oil Co.'s No. 28 McFaddin (workover) ..... Drlg. sandy shale 4,799 ft.
Yount Lee Oil Co.'s No. 31 McFaddin (workover) ..... Drlg. sandy lime 3,517 ft.
Yount Lee Oil Co.'s No. 97 McFaddin (workover) ..... Drlg. sand 4,872 ft.
Yount Lee Oil Co.'s No. 118 McFaddin ..... Comp flowing 300 bbls. oil 4,933 ft.
Yount Lee Oil Co.'s No. 119 McFaddin ..... Drlg. sand 4,083 ft.
Yount Lee Oil Co.'s No. 120 McFaddin ..... Drlg. shale and lime 2,511 ft.
Yount Lee Oil Co.'s No. 57 Gladys City (workover) .... Abandoned 3,605 ft.
Yount Lee Oil Co.'s No. 97 Gladys City ..... Drlg. shale and lime 5,083 ft.
Yount Lee Oil Co.'s No. 98 Gladys City ..... Comp. flowing 1,600 bbls. fluid, 1 per cent salt water 3,259 ft.
Yount Lee Oil Co.'s No. 99 Gladys City ..... Rigging up.
Yount Lee Oil Co.'s No. 11 fee (workover) ..... Drlg. sand 3,243 ft.

WEST COLUMBIA—BRAZORIA COUNTY

Continental Oil Co.'s No. 1 Hogg ..... Drlg. hard sandy lime 5,859 ft.
Gulf Production Co.'s No. 3-B Hogg ..... Drlg. sandy shale showing oil 3,700 ft.
Humble Oil & Refg. Co.'s No. 3 Smith ..... Drlg. heaving shale 5,173 ft.
Saxet Oil Co.'s No. 2 Hogg ..... Drlg. sandy shale 3,526 ft.
The Texas Company's No. 25 Arnold ..... Sand showing oil 2,767-74 ft.

HIGH ISLAND—GALVESTON COUNTY

Gulf Production Co.'s No. 5-A Smith ..... Drlg. 3,457 ft.
Marrs McLean's No. 6 Cade (old well) ..... Drlg. 3,661 ft.
Marrs McLean's No. 12 Cade (workover) ..... To deepen.

ORCHARD—FORT BEND COUNTY

Gulf Production Co.'s No. 19 Moore ..... Drlg. sandy shale 6,756 ft.

DAMON MOUND—BRAZORIA COUNTY

H. R. Cullen's No. 2 Smith ..... Drlg. gumbo 1,912 ft.

REFUGIO—REFUGIO COUNTY

Benedum & Trees' No. 3 Rooke ..... Rebuilding derrick to deepen 3,865 ft.
Morgan Oil Corp.'s No. 1 Fox, Block 72 ..... Derrick.
Morgan Oil Corp.'s No. 2 Fox heirs ..... No report.
Morgan Oil Corp.'s No. 3 City ..... Set 15-ft. screen 3,699 ft.; comp. flowing 600 bbls. pipe line oil.
Morgan Oil Corp.'s No. 1 Johnson ..... Rig
Morgan Oil Corp.'s No. 1 Strauch ..... Cem. 6⅝-in. casing 3,673 ft.; bottom 3,683 ft.

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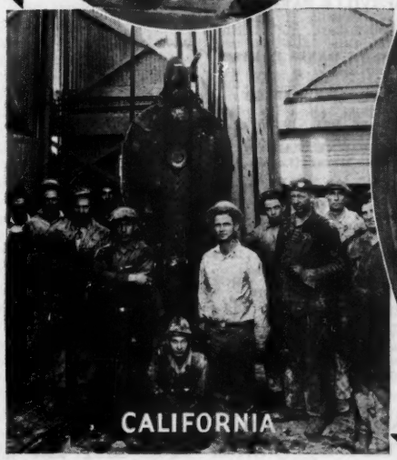

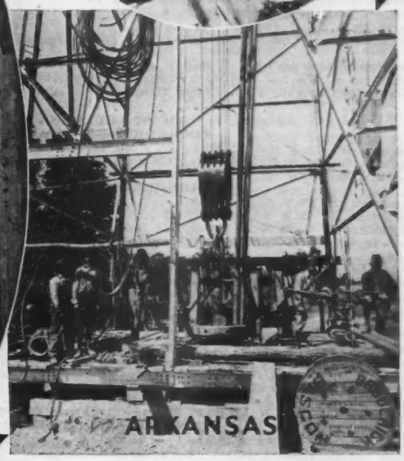

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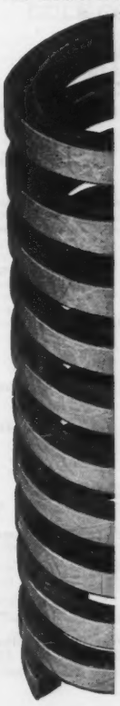

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DURAMETALLIC PACKINGS

Herman F. Heep's No. 1 Rutherford ..... Derrick.
Houston Gulf Gas Co.'s No. 6 Shelly ..... Drlg. shale 3,649 ft.
Houston Gulf Gas Co.'s No. 1 Lambert ..... Drlg. hard sand 3,132 ft.
Houston Gulf Gas Co.'s No. 4 Fannie Heard (workover) .. Testing sand showing oil 3,611 ft.
Houston Gulf Gas Co.'s No. 3 Tom Heard ..... Drlg. shale 3,126 ft.
Houston Gulf Gas Co.'s No. 2 Cummings ..... Drlg. gumbo 3,230 ft.
Houston Gulf Gas Co.'s No. 2 Morgan Shelly ..... Oil sand 3,649-57 ft.; to test 8¾-in. casing.
Houston Gulf Gas Co.'s No. 9 J. A. Lambert (workover).. Rig up to work over.
Houston Gulf Gas Co.'s No. 2 Morgan-Vance ..... Location.
Mission Drlg. Co.'s No. 1 Henry Heard ..... Drlg. sandy shale 1,092 ft.
Mission Drlg. Co.'s No. 2 O'Brien ..... Set surface casing 540 ft.
Mission Drlg. Co.'s No. 1 Eskridge-Heard ..... Set 12 ft. screen; com. flowing 500 bbls. oil 3,669 ft.
Mission Drlg. Co.'s No. 2 Mitchell ..... Reaming gumbo 4,896 ft.
Mission Drlg. Co.'s No. 2 Powers (workover) ..... Rig.
Oiguier Oil Co.'s No. 3 Ryalls ..... Rig.
Refugio Oil Corp.'s No. 2 Murphy ..... Drlg. gumbo 1,140 ft.
Saxet Oil Co.'s No. 1 Serafine ..... Comp. gas well 3,693 ft.; est. 50,000,000 ft.
Saxet Oil Co.'s No. 1 Ryals ..... Drlg. sticky shale 1,150 ft.
Saxet Oil Co.'s No. 3 Holmes Heard ..... Derrick.
Saxet Oil Co.'s No. 11 Clint Heard ..... Cem. 6⅝-in. casing 3,668 ft.; total depth 3,672 ft.
Houston Oil Co.'s No. 2-F Rooke ..... Comp. dry gas 1,425 pounds pressure 3,682 ft.
Houston Oil Co.'s No. 9 Wilson Heard ..... Drlg. sandy shale 3,277 ft.
Houston Oil Co.'s No. 11 Pratt-Hewitt-Rooke ..... Rig.
Houston Oil Co.'s No. 12 Pratt-Hewitt-Rooke ..... Location.
Independent Oil & Gas Co.'s No. 1 O'Brien ..... Drlg. shale 5,940 ft.
Independent Oil & Gas Co.'s No. 1 Claude Heard ..... Cem. 9⅝-in. casing 3,668 ft.; total depth 3,674 ft.
Independent Oil & Gas Co.'s No. 1 Anna Reilly ..... Comp. gas well spraying oil 3,685-94 ft.
Independent Oil & Gas Co.'s No. 1-A J. F. B. Heard ..... Set surface casing 457 ft.
Independent Oil & Gas Co.'s No. 4 Reilly ..... Set surface casing 454 ft.
Independent Oil & Gas Co.'s No. 5 Reilly ..... Drlg. sandy shale 1,366 ft.
Larco Co.'s No. 1 Strauch ..... Spudded.
W. L. Pearson, trustee, No. 2 Fox ..... Comp. flowing 550 bbls. pipe line oil 3,700-3,708 ft.
Pearson Properties' No. 1 Bailey ..... Derrick.
Ed Price et al's No. 1 Mission River ..... Derrick.
The Texas Company's No. 1 Clint Heard ..... Killed gas pressure 3,672 ft.; to deepen.

SOUTH LOUISIANA FIELDS
LOCKPORT—CALCASIEU PARISH

Vacuum Oil Co. & Gulf Refining Co.'s No. 25 Miller ..... Location.
Vacuum Oil Co. & Gulf Refining Co.'s No. 8 Bordages ... Location.
Vacuum & Gulf's No. 3 State ..... Drlg. shale 5,544 ft.

HACKBERRY—CAMERON PARISH

Calcasieu Oil Co.'s No. 5 Lemke ..... Drlg. 2,251 ft.
Calcasieu Oil Co.'s No. 4 Caldwell ..... Drlg. sand and shale 5,106 ft.
Calcasieu Oil Co.'s No. 3 Valery ..... Drlg. 3,189 ft.
Rycade Oil Corp.-Humble Oil & Refg. Co.'s No. 4 Gulf Land ..... Set 18-in. surface casing 62 ft.
Yount Lee Oil Co.'s No. 2-B Lacey, Old Hackberry ..... Drill stem stuck; abandoned.
Yount Lee Oil Co.'s No. 2 Carter & Sweeney, Old Hackberry ..... Drlg. shale 4,329 ft.
J. F. Sutton' No. 1 Duhon (Old Hackberry) ..... No report.

JENNINGS—ACADIA PARISH

Jennings Petroleum Co.'s No. 3 Syndicate fee ..... Drlg. 1,631 ft.
Kathleen Oil Co.'s No. 1 Syndicate (workover) ..... Shut down 3,922 ft.
The Texas Company's No. 5 Rayne heirs (King tract).... Drlg. 5,167 ft.
Yount Lee Oil Co.'s No. 5 Crowley, Sec. 48-9s-3w ..... Rig.
Yount Lee Oil Co.'s No. 7 Houssiere-Latrielle, Sec. 47-9s-2w ..... Drlg. approximately 7,400 ft.
Yount Lee Oil Co.'s No. 1 E. F. Simms (northwest side).. Drlg. lime and shale 5,060 ft.

EDGERLY—CALCASIEU PARISH

C. H. Box, trustee, No. 1 Reed ..... Derrick.
Green Oil Co.'s No. 2 Moore (workover) ..... Shut down 2,844 ft.
Hercules Oil Co.'s No. 3 Paraffin (workover) ..... Drlg. 3,594 ft.
Rex Petroleum Co.'s No. 8 Hunter (workover) ..... Comp. pumping 100 bbls. fluid, 50 per cent oil, 3,738 ft.
Rex Petroleum Co.'s No. 1 Narroni (workover) ..... Fishing drill pipe 3,928 ft.

VINTON—CALCASIEU PARISH

Marrs McLean's No. 4 Gray (workover) ..... Drlg. 1,506 ft.
Vinton Petroleum Co.'s No. 19 Vincent (workover) ..... Drlg. 2,856 ft.
Vinton Petroleum Co.'s No. 7 Gray (workover) ..... Drlg. 2,362 ft.

BAYOU BOUILLON—ST. MARTIN PARISH

Rycade Oil Corp.'s No. 7 Bouillion fee ..... Shot and pulled stuck drill pipe 4,806 ft.
Rycade Oil Corp.'s No. 9 Bouillion fee ..... Location.
Rycade Oil Corp.'s No. 2 Atchafalaya fee (oil well) .... Rig up to deepen; present depth 3,045 ft.

STARKS—CALCASIEU PARISH

J. O. Davis' No. 1 Industrial ..... Rig.
Gulf Production Co.'s No. 16 Lutcher-Moore ..... Comp. flowing 50 bbls. pipe line oil 838 ft.

SWEET LAKE—CAMERON PARISH

Pure Oil Co.'s No. 7 Yount Lee ..... Standing cem. 6,881 ft.
Pure Oil Co.'s No. 9 Yount Lee ..... Derrick.

SORRENTO—ASCENSION PARISH

Gulf Refining Co.'s No. 16 United Land Co. ..... Drlg. 3,256 ft.

MISCELLANEOUS WILDCATS
TEXAS
AUSTIN COUNTY

Empire Gas & Fuel Co.'s No. 1 Jackson, San Felipe..... Sand and shale showing oil 3,143 ft.; to test.

BRAZORIA COUNTY

Mills Bennett Production Co.'s No. 1 Allen, Allen Dome.. Drlg. hard lime 2,318 ft.
Faust et al's No. 5 Faust ..... Drlg. sand, lime and shale 2,820 ft.
Shell Petroleum Corp.'s No. 1 Blakely-Winston, Danbury ..... Ran tubing; swabbed 50 bbls. fluid, 86 per cent 22.1 gravity oil, in 20 hours; waiting orders.
Steel & Strickland's No. 1 Lockridge ..... Rig.

CHAMBERS COUNTY

Chicago Oil Corp.'s No. 1 Lawrence ..... Drlg. shale 2,912 ft.

FORT BEND COUNTY

Pure Oil Co.'s No. 1 Farris, Roberts Sur. ..... Location.

HARRIS COUNTY

Baldwin and associates' No. 1 Kitzman, Cypress ..... To reset screen 4,055 ft.
R. E. Brooks' No. 1 Beall, Eureka ..... Spudded.
Golf Crest Oil Co.'s No. 1 Gulf Crest ..... Standing 2,520 ft.
A. F. Belunek's No. 1 Thompson ..... Rig.
Cranfill & Reynolds' No. 1 Brown ..... Drlg. shale 3,086 ft.
Hammond et al's No. 1 Brodt ..... Gumbo 1,190 ft.; shut down after fire.
Higgins Oil & Fuel Co.'s No. 1 Sladous, Mykawa ..... Rig.
Humble Oil & Refg. Co.'s No. 6 Warren Hockley..... Drlg. hard sand and pyrites 4,795 ft.
Humble Oil & Refg. Co.'s No. 2 Minnetex ..... Spudded.
Humble Oil & Refg. Co.'s No. 2 Woodburn ..... Drlg. shale 3,310 ft.
Rich et al's No. 1 Highlands ..... Derrick.
Torsen et al's No. 1 Stewart ..... Shut down 2,580 ft.
Watts Brothers' No. 1 Hubert, Mykawa ..... Drlg. shale and boulders 2,206 ft.
York & Robertson's No. 1 Garrett, Harris & Carpenter Sur. ..... Sandy shale 1,917 ft.; shut down.

JEFFERSON COUNTY

Deep Test Oil Corp.'s No. 1 Faith-McFadden ..... No report.
Gulf Production Co.'s No. 8 Bordages ..... Drlg. shale and lime 2,967 ft.
Gulf Production Co.'s No. 4 Burrell ..... Drlg. gumbo 2,963 ft.
Gulf Production Co.'s No. 2 Guy Junker, Fannette ..... Started drilling.
River Oil Corp.'s No. 1 Ship Channel, Brown Survey .... Standing.
Rosedale Oil Co.'s No. 1 Walker ..... Shut down.
The Texas Company's No. 2 Pipkin, Big Hill ..... Drlg. 5,606 ft. after drilling plug.
The Texas Company's No. 1 Fitzhugh, Big Hill ..... Drlg. hard sand 5,022 ft.

LIBERTY COUNTY

Campbell et al's No. 1 fee ..... Rig.
Gulf Production Co.'s No. 1 Weiser ..... Drlg. 4,813 ft.
Gulf Production Co.'s No. 3 Boyt, Hankamer ..... Drlg. 2,757 ft.
Humble Oil & Refg. Co.'s No. 6 Sterling, Moss Bluff .... Drlg. shale and lime 5,592 ft.
Cranfill Reynolds Co.'s No. 1 Vajdak, Sheeks ..... Reaming 5,279 ft.
Cranfill Reynolds' No. 1 Thomas Davis, Sheeks ..... Drlg. rock 1,717 ft.
Yount Lee Oil Co.'s No. 2 Moores Bluff, Sheeks ..... Spudded.

MONTGOMERY COUNTY

Kelley-Baker et al's No. 1 Juerges ..... No report.

ORANGE COUNTY

Gulf Production Co.'s No. 1 J. R. Starks, Port Neches ... Drlg. 4,867 ft.
Gulf Production Co.'s No. 1 M. H. Starks, Port Neches ... Location.
The Texas Company's No. 1 Polk, Port Neches ..... Preparing to test sand 3,146 ft.

WALLER COUNTY

Talbert & Markle's No. 1 Young ..... No report.

SOUTH LOUISIANA
ASCENSION PARISH

Triumph Oil Corp.'s No. 2 Lacey, Sec. 20-10s-4e ..... No report.

ASSUMPTION PARISH

Gulf Refining Co.'s No. 1 Armitese, Napoleonville ..... Rig.
Poor Boys Drilling Co.'s No. 1 LeBarre, Sec. 47-12s-13e .. Rigging up.

CALCASIEU PARISH

J. O. Davis' No. 1 Mimms, Sec. 20-9s-7w ..... Abandoned 6,181 ft.
Wilfred Sahay's No. 2 James ..... Drlg. 3,800 ft.

CAMERON PARISH

Shell Pet. Corp.'s No. 6 Watkins, Black Bayou ..... Cored hard sand 4,916 ft.
Shell Pet. Corp.'s No. 1 Marceaux, Mallard Bay, Sec. 32-12s-3w ..... Drlg. hard sand and fossils 4,931 ft.
The Texas Company's No. 4 Calcasieu Lake, Calcasieu Lake Dome ..... Abandoned 5,484 ft.
Yount Lee Oil Co.'s No. 1 Starks, Sec. 1-15s-15w ..... Drlg. sand and shale 6,100 ft.

IBERIA PARISH

Gulf Refining Co.'s No. 11 State, Loreauville ..... Drlg. 1,341 ft.
Jefferson Lake Oil Co.'s No. 3 Lake Piegneur ..... Abandoned 789 ft.
The Texas Company's No. 4 Vermillion Bay ..... Drlg. hard sand 3,585 ft.

IBERVILLE PARISH

Standard Oil Co.'s No. 3 Wilbert, Bayou Blue ..... Derrick.
Standard Oil Co.'s No. 4 Wilbert, Bayou Blue ..... Rig.
Standard Oil Co.'s No. 5 Wilbert, Bayou Blue ..... Drlg. 936 ft.

JEFFERSON DAVIS PARISH

Vacuum Oil Co.'s No. 2 DeVilbiss, Roanoke ..... Drlg. gumbo 6,579 ft.
Yount Lee Oil Co.'s No. 1 Courtney, Welsh ..... Spudding.

LA FOURCHE PARISH

Gulf Refining Co.'s No. 25 Stark, Thibodaux ..... Rig.
Gulf Refg. Co.'s No. 1 City of New Orleans, Bay Champagne ..... Rig.

PLAQUEMINE PARISH

Humble Oil & Refg. Co.'s No. 1 Cockrell-Moran, Lake Grand Ecaille ..... Drlg. 406 ft.
Humble Oil & Refining Co.'s No. 1 Lake Washington, Lake Grand Ecaille ..... Drlg. 4,309 ft.
The Texas Company's No. 3 Garden Island Bay ..... Drlg. 800 ft.

ST. LANDRY PARISH

Elbof Exploration Co.'s No. 1 Ledoux, Eunice..... Drlg. 1,700 ft.
Herbert-Baker Oil Co.'s No. 1 Fisher, Section 10-3S-4e... Drlg. 1,987 ft.

ST. MARY PARISH

Louisiana Land & Expl. Co.'s No. 1 Clark, Lot 15-16s-12e.. Drlg. 402 ft.

ST. MARTIN PARISH

Bayou Teche Oil Co.'s No. 1 Fournet, Cypress Island..... No report.
Ohio Oil Co.'s No. 5 Martin, Hager ..... Derrick.
The Texas Company's No. 1 fee, Hager Dome ..... Drlg. 5,300 ft.
The Texas Company's No. 2 fee, Hager ..... Location.
The Texas Company's No. 2 St. Martin, Hager ..... Drlg. 4,139 ft.
The Texas Company's No. 4 fee, Hager ..... Location.
The Texas Company's No. 1 Iberville, Hager ..... Drlg. 1,462 ft.
The Texas Company's No. 2 Iberville, Hager ..... Location.
The Texas Company's No. 3 Iberville, Hager ..... Location.

TANGIPAHOA PARISH

Completion Oil Co.'s No. 1 Amos ..... No report.
Joan Development Co.'s No. 1 Hilton, Sec. 20-9s-9e ..... Cem. 6⅝-in. casing 3,000 ft., standing.

TERREBONNE PARISH

The Texas Company's No. 3 State-Bay St. Elaine..... Drlg. salt 2,417 ft.
The Texas Company's No. 2 La. L. & E. Co., Dog Lake.. Shut down 800 ft.
The Texas Company's No. 1 State—Bay Junop..... To test oil sand 4,778 ft.
The Texas Company's No. 3 State—Lake Pelto..... Derrick.
The Texas Company's No. 2 State—Caillou Island..... Rig.

CALIFORNIA FIELDS

(Continued from Page 64)

distance of the Pacific Ocean. This new well, which is an 80-bbl. pumper from 1,458 feet, was finished in the Williams zone discovered by the Lincoln Drilling Co. several months ago. In addition to completing No. 2 Becker fee, Getty spudded in well No. 1 on State permit No. 16 and is assembling derrick material for well No. 11 on the same permit. Six producing wells have been completed in the Williams zone up to the present time by George F. Getty and the Lincoln Drilling Co. These projects have been on irregular production due to the inability to dispose of the total amount of oil produced but under favorable conditions they should be capable of producing an aggregate of 440 bbls. per day. George F. Getty's No. 1 Becker fee has a potential daily production of 65 bbls., No. 2 Becker fee 80 bbls., and No. 1 Sandoma 45 bbls. The Lincoln Drilling Co.'s Nos. 1, 2 and 3 on the Williams lease are good for 105 bbls., 70 bbls. and 75 bbls., respectively. The Santa Barbara Mesa Field is almost totally deserted following its failure to show consistent commercial production and practically all of the derricks erected as a result of the intensive development campaign which was precipitated by the Olympic's discovery well, have been removed. The Lincoln Drilling Co. recently started a test on the Medcliff property in Section 30-4-27 in order to ascertain whether there was a possibility of the primary accumulation being located closer to the ocean front and this project, which showed a small flow from 2,234 feet, is being rigged up for a pumping test.

Kettleman Hills

The Petroleum Securities has indefinitely suspended drilling operations on No. 1 Robinson in the Kettleman Hills Field of Kings County at 8,310 feet pending further developments. This is by far the deepest hole drilled in this new field up to the present time and, while it may be considered a dud, it does not make the north dome look any less favorable as it is located more than a mile south of the axis. All indications point to the existence of a long narrow structure at Kettleman and the failure of this project to correlate with producing wells tends to confirm this deduction. It does, of course, definitely establish the southern limits of production but should not be considered as detrimental to the field as a whole because of its rather unfavorable position structurally. The Standard offset this by picking up the Elliott sand in Section 3-22-17 and suspended work on well No. 41 at 7,214 feet in conformity with the Kettleman Hills agreement. This makes a total of five wells which have been suspended on top of the pay. The Milham has shut down two drillers, both of which could be put on production within a very short time. One of these, No. 1 Kennedy in Section 28-21-17, which was suspended in the pay at 7,373 feet, is of paramount importance as it is located over 3 miles west of the discovery and will extend the productive limits upon completion when drilling restrictions are lifted. George F. Getty's No. 1 Armstrong in Section 4-22-17 and the Continental's No. 13 Elliott in Section 2-22-17 have also been suspended in accordance with the drilling and production agreement which contemplates a suspension until July 1, 1932.

Suggestions on the part of the Federal Government that unified development of the Kettleman Hills would tend to con-

serve oil and gas has failed to find favor with the majority of operators and, from the writer's contact with operators, any attempt to effect unification would be simply a waste of effort. The unit plan was discussed in detail by operators a long time ago and it was the consensus of opinion that it could not be done under present conditions. It might be interesting to mention that operators established set-back lines and agreed to restrict the number of drilling wells on an acreage basis shortly after the discovery came in last year. Kettleman Hills operators will hold a meeting on November 26 for the purpose of determining the amount of money to be paid out to operators holding acreage adjoining the two producing wells. It will be recalled that operators permitted to drill wells into completion in conformity with the Kettleman agreement agreed in consideration of this stipulation to pay over a certain part of their income to those operators on adjoining acreage who were not permitted to drill into completion.

Midway-Sunset

Two new wells were finished in the Midway-Sunset Field of Kern County this week, one of them being located in the older productive area. This was the Chanslor-Canfield Midway Oil Co.'s No. 85 in Section 8-32-23, which came in flowing 490 bbls. of 22.9 gravity oil and 900,000 feet of natural gas daily from 2,958 feet, the hole having been finished with an 8⅝-inch oil string carrying 714 feet of perforated. The crew from this well was immediately shifted to No. 86 and preparations started to spud in. The Republic Petroleum, which discovered this extension some two years ago, also started a new well, No. 36 in Section 8-32-23, having been spudded in several days ago.

Out in the Maricopa flats section of the Midway-Sunset Field the Hancock Oil Co. successfully finished No. 2 Maricopa in Section 8-11-23 flowing 1,780 bbls. of clean pipe line oil daily from 2,995 feet. The next producer finished in this area should be No. 1 Son of the Doyle Petroleum in Section 8-11-23 as this project topped the oil sand at 3,439 feet and subsequently landed the water string. The North American, Rio Grande, Union, Signal Oil & Gas Co. and Standard should also list one or more new completions in the very near future. The General Petroleum successfully finished No. 16 Glide, a new well in the Mount Poso Field of Kern County a few days ago and this new producer, located in Section 21-27-28, is pumping 270 bbls. of 15.5 gravity oil from 1,671 feet. The Shell, Signal Oil & Gas Co. and Union also completed new wells in this field during the week but these projects were shut in without making a test.

Long Beach

Operators at Long Beach have reached their goal of 100,000 bbls. a day and no difficulty is expected in keeping the field production down to the allowable quota just mentioned. To reach this objective, operators have pinched in approximately 80,000 bbls. a day. Only two wells were finished at Long Beach this week, one of which was a recompletion after having been redrilled and deepened. This was No. 2 Lindauer of the Edington & Witz Oil Co., which came in doing 925 bbls. per day from 6,928 feet. The Hancock Oil Co. listed No. 19 Signal for completion at 7,245 feet, from which depth it registered an initial of 470 bbls. daily. It has been subsequently pinched in to 348 bbls. in conformity with the crude oil curtailment agreement. The Shell heads the list at Long Beach from a production standpoint with a daily output of 15,500 bbls., followed by Richfield with 8,500 bbls., Dabney & Johnston with 8,250 bbls., The Texas Company with 3,100 bbls., Union with 1,900 bbls., and the General Petroleum with 1,125 bbls.

The townlot section of the Potrero Field looks like a dud at the present time and an attempt is under way to develop production in a second zone which shows a little promise around 4,700 feet. The outcome, however, is still in doubt. I am still of the opinion that the upper zone in this area will not sustain intensive development and cannot therefore be expected to pay out. Operators have put the brakes on promiscuous drilling in this area within the past few weeks and unless some change for the better takes place most of the wells scheduled to be drilled will never even be started. The two wells finished in the Potrero townlot section up to date do not look any too hot. George F. Getty's No. 1 Potrero is pumping 65 bbls. per day while York & Lockhart's No. 1 is pumping 305 bbls. every 24 hours. Both projects are cutting 25 per cent water.

Seal Beach

Two new wells were finished in the Seal Beach Field of Los Angeles basin this week but neither of them registered substantial production. The Continental's No. 31 Bixby came in flowing 795 bbls. of clean 24.6 gravity oil from the Wasem zone at 5,500 feet, the hole having been finished with an 8⅝-inch combination string cemented through perforations at 4,854 feet. No. 30 Bixby, an offset to No. 31, was also passed for production this week but water broke in and another cement job will be necessary. The Standard completed No. 24 San Gabriel at 5,479 feet but the output, 220 bbls. daily, is not very satisfactory as it is cutting 25 per cent. One completion and one abandonment just about sums up development work in the Richfield district this week, although several more potential producers should be tanking oil in the near future. The new well added is No. 2 Guarantee of the Superior Oil Co., which was returned to production pumping 165 bbls. daily after being redrilled and deepened to 4,500 feet. The abandonment chalked up was No. 1 Lypps of the Continental Oil Co., which came in as a salt water well from 4,845 feet.

Deep zone development has again been postponed in the Huntington Beach Field by mutual consent, although one operator still contemplates a deep test. The Sunset Pacific Oil Co. successfully finished its No. 4 Bolsa Chica doing 110 bbls. daily from 4,628 feet this week and indications point to the probable completion of the Richfield's No. 1 Paige some time within the next few days. The Association cemented a string of 6⅝-inch in No. 3 De Francis, which is being carried down into the deep zone in the Dominguez Field and drilling will be resumed within the next few days at 5,111 feet. Production work and development activities have been retarded in this field for several years due to the desire to keep this field back until conditions improve and the price of oil is commensurate with its intrinsic value. It is interesting to note that 18 wells are still flowing, although very little drilling has been done during the past few years. Thirteen others are flowing under compression and 23 more pumping. The Shell and Union have been repressuring Dominguez for some time and are at present reintroducing dry gas into the producing formation through five wells especially selected for that purpose. A check shows ten flowing wells, 54 pumpers and 40 producing on compressors at Rosecrans. The Lawndale Field of Los Angeles Basin, which proved a dismal failure from a development standpoint, has four flowing wells and two pumpers. This field is making 1,100 bbls. a day and is credited with 70 abandoned holes.

Wildcats

The Continental Oil Co., which has made a persistent effort to open up a new field at Carpenteria, abandoned its second wildcat in this area but preparations are being made to drill a third test down on the beach where the chance of getting production appears much better. The Continental's second test at Carpenteria failed to reveal anything of importance, notwithstanding that the initial hole, located about 300 feet west, showed such a high gas pressure that further work was rendered impossible. George F. Getty is also expected to prospect this area soon as he is preparing data for submission to the United States War Department to accompany his application for permission to construct a wharf in order to facilitate the drilling of a test on one of several tideland drilling permits. This move is regarded as of considerable importance in view of the fact that the Continental has decided to drill its third hole down on the beach several hundred feet east of Getty's holdings.

The General Petroleum is also making preparations to engage in tideland development but this projected work is located about 3 miles east of the Elwood Field. A road has already been constructed down to the beach on the More ranch and wharf construction is scheduled to get under way soon. The General Petroleum's No. 1 More, located on the bluffs back of the shore line, blew in a few months ago doing 50,000,000 feet of natural gas daily. No. 2 More, a second test, was down 2,722 feet several days ago. The Standard located a new wildcat in Santa Barbara County this week and, while the exact location has not yet been surveyed, the hole will be located at Casitas Pass in Section 26-4-25 where a geological survey reveals favorable indications.

In Southern California several new locations were staked this week for prospective wildcats. The most important of these was No. 1 Sansinena of the Union Oil Co. in the La Habra district of Los Angeles basin. The Union's geoglogical department has worked out an anticlinal structure totally within the Sansinena Ranch and preparations are being made to test it out for production. The Commonwealth Oil Co. has just spudded in a wildcat located between the Dominguez and Rosecrans Fields in an effort to open up a new productive structure between these two districts. The Western Gulf has stepped into the Puente Hills area where several wildcats have recently been started and preparations are being made to drill a test on the Diamond Bar Ranch in Section 28-2-9. The Puente Hills district has been teasing wildcatters for a long time, in fact a new set of operators go into that region about every so often. Previous tests have shown enough oil to encourage one to go ahead but upon conclusion of work it seems to be the same old story of too much water and not enough oil. Perhaps this time better results will be obtained. Six tests are under way in this general area at present in addition to the Anchor Oil Co.'s test in Section 19-2-10, which is standing suspended. In the Playa Del Rey district the Ohio Oil Co. expects to make a test of showings found in its wildcat at 6,199 feet but will land another water string around the 6,000 foot level before undertaking this move as it also has some shallow showings to test out later. Two more projected shallow tests got under way in the Newhall district this week and several more are expected to locate soon.

GULF COAST FIELDS

(Continued from Page 50)

SOUTH LOUISIANA

Anse La Butte	45
Bayou Blue	613
Bayou Bouillon	110
Black Bayou	660
Dog Lake	13
Edgerly	636
Jennings	1,543
Hackberry	4,396
Lake Barre	407
Lake Pelto	188
Lockport	3,655
New Iberia	20
Port Barre	100
Sorrento	25
Starks	366
Sulphur	6,150
Sweet Lake	17
Vinton	4,465
Welsh	213
White Castle	150
Total South Louisiana	23,772
Week ending November 16	24,478
Decrease	706
Total Gulf Coast	187,220
Week ending November 16	190,456
Decrease	3,236

LA.-ARK. FIELDS

(Continued from Page 55)

Reworking old wells in Smackover continues and meanwhile two wildcats have been started in the Mount Holly district. Pure Oil Co. has rig up for No. 1 A. A. Wilson in Section 26-15-18, a half mile or so west of the three or four wells that have produced in that area, and Artex Oil Co. has rig up for No. 1 Smith in Section 31-15-17, between Mount Holly and Smackover (Louann) producers on the east. W. M. Coates and others' wildcat, 2 miles northwest of Junction City, La.-Ark., which has been hanging fire for the past two months or more, ran sand tester at 4,071 feet, got nothing and is waiting orders. Two months or more ago it had a good show of oil in a core of 4½ feet of sand. Waiting all this time has not done it any good.

The Texas Company's No. 1 Avera, Section 35-15-15, Ouachita County, (Smackover) pumped 20 bbls. initial from 2,000 feet. Skelly Oil Co.'s No. 2 Langley, Section 25-15-15, made 10 bbls. oil and 20 bbls. salt water from 2,016 feet. Both were new wells drilled from the grass roots down and not old Graves sand producers plugged back and tested in the Nacatoch. Joe Marr's No. 2 Goodwin, Section 34-19-14, Union County, was a salt water hole at 2,470 feet.

Arkansas River Valley

In the Arkansas River Valley of central north Arkansas the leasing play of early summer is being followed by drilling. Cosden Oil Co. of Arkansas has a well in Cleburn County and another in Pope County under way. The former is No. 1 Donophan in Section 19-9-10 which began drilling November 10 and is down around 350 feet, and the latter is No. 1 Missouri Pacific Railroad, Section 13-9-19. It is drilling, having begun before the Cleburn County test. W. M. Greeson, who had a well started in Pope County two or three years ago but abandoned it for lack of encouragement, shows up in the last report of permits issued by the Arkansas Conservation Commission as having started No. 1 C. S. Parkes in Section 31-8-24, Pope County. Transcontinental Oil Co. has cemented 8-inch at 2,058 feet on No. 1 Novack, Section 36-2n-6, Prairie County, and Brownlee Drilling Co. is making hole below 230 feet on No. 1 Whitted, Section 28-4-1e, St. Francis County. Transcontinental's well is in an area where two or three wells were drilled five or six years ago, possibly more, and got salt water.

Three Union County wildcats were written off as failures. E. M. Jones' No. 1 Loutre Lumber Co. in Section 17-19-14, 6 miles east of El Dorado South Field production and twice that many south of El Dorado East Field, was a dry hole at 3,350 feet. His No. 1 Hardy & Murphy, Section 34-18-14, was abandoned at 4,000 feet, and Shell Petroleum Corp. abandoned No. 1 Carroll, Section 19-18-16, as a duster at 3,502 feet in black shale. With past experience of the Lisbon and Urbana areas to bank on, it does seem that wildcatters should know better than to start with less than 4,500 feet as their destination.

Arkansas-Louisiana Pipe Line Co. got two dry holes in its Arkansas Valley activities. No. 2 Bynum, Section 12-10-24, Johnson County, had nothing but grief all the way down to 3,720 feet and was continued past horizons where it might reasonably have been expected to get the Clarksville gas. It does not by any manner of means condemn its particular immediate vicinity—there are eight sands to be developed, some of which have been proven and are now helping Arkansas Natural Gas Corp. supply its Arkansas customers. The company's No. 1 Hanna, Section 26-7-23, Logan County, also was a failure. It hit heaving shale at 4,140 feet and although it went 30 feet farther never was able to cure the trouble and stands on the records as a dry hole or, more properly, junked at 4,170 feet.

Robeline Oil & Gas Co. abandoned No. 1 Cassady, Section 7-8-9, Natchitoches Parish, Louisiana, standing shut down at 3,230 feet since last June, and moved the rig to drill No. 1 Winn in the same section. The well reported gas at 3,100 and 3,230 feet.

Panola County

Three wells were completed in the Panola County, Texas, gas district. Eureka Natural Gas Co.'s No. 1 Jeter in the John Womack Survey tested 5,000,000 feet of gas at 735 pounds, total depth 2,960 feet—not so good as to volume or pressure—and Magnolia Petroleum Co.'s No. 3 T. C. Adams in the James Mat-

thews Survey was a dry hole at 2,850 feet. The Texas Company's No. 7 G. W. Brumble in the E. F. Mitcheson Survey was somewhat better—1,500,000 feet of gas at 2,348 feet.

Daily Average Production

Production of the Shreveport district for the week totaled 100,390 bbls. of which Louisiana pools furnished 36,425 bbls. and Arkansas 63,965. Production, daily average pipe line runs, from the several pools was:

LOUISIANA	
Caddo, light	10,815
Caddo, heavy	2,915
Homer	3,710
Haynesville	4,840
De Soto-Red River	2,915
Elm Grove	515
Bellevue	630
Cotton Valley	2,500
Urania	5,510
Pleasant Hill	1,400
Sarepta	675
Total	36,425
ARKANSAS	
El Dorado	4,300
Smackover, light	5,810
Smackover, heavy	45,115
Stephens	1,020
Nevada County	1,050
Lisbon	1,115
Champagnolle	5,470
Bradley	85
Total	63,965
Both states	100,390
Last week	99,785
Increase	605

MICHIGAN FIELDS

(Continued from Page 63)

pany's No. 1 Sarah Cashen, NW SW Section 30-15n-3w, Denver Township, Isabella County.

Indications are that a new pool separate from the present proven area in Chippewa and Greendale Townships of Isabella and Midland Counties, respectively, will be opened up by the new drilling activity north of Mount Pleasant.

The Pure Oil Co. took out three permits, two in Greendale Township, Midland County, and one in Chippewa Township, Isabella County. They are: No. 1 S. O. Vinton, NW NE NW Section 18-14n-2w, and No. 2-B State-Midland, NE NW NW Section 18-14n-2w, and the No. 1 John R. Veit, NW NW SE Section 11-14-3, Chippewa Township.

The other new location in the field is H. E. Pollock's No. 1 Zingery, SW SW Section 25-15n-4w, Isabella Township, Isabella County.

The wildcat south of the field is Earl E. Durham's No. 1 Roy Durham, N half SE Section 25-10n-1e, Hamilton Township, Gratiot County.

Pennsylvania-Miller Well Gets Oil

One of the best shows of oil discovered in general wildcat activity throughout Newaygo County was struck in the Pennsylvania Oil & Gas Co.'s No. 1 Miller well in Goodwell Township about 7 miles east of White Cloud. Oil was struck at 2,797 feet, 12 feet in the upper Traverse limestone, and at 1 foot in the pay sands was filling up rapidly enough to make from 1 to 2 bailers an hour, or 25 to 50 bbls. a day. The Pennsylvania-Miller well is the third wildcat in Newaygo County to have a promising show of oil in the upper Traverse formation.

The Pennsylvania Oil & Gas Co. also had a fair show of oil in the Dundee formation in its No. 1 Bert Snow well, NW SE Section 23-15-15, Leavitt Township, Oceana County. There is little gas in the new Miller well but it is hoped that it may be made a commercial producer and that it indicates the possibility of finding a new western Michigan Pool in Newaygo County.

Two other wells are now drilling in the county between Grant and Newaygo. Each is about 2,000 feet deep and they are expected to reach the upper Traverse next week. One is the Harvey Syndicate's No. 1 Baumgartner, NE NE Section 33-12-13, Garfield Township, and the other is the Atlantic Exploration Co.'s No. 1 Brydges, NW SW Section 12-11-13, Ashland Township. The former is about 6 miles northwest of Grant and the latter is about 2 miles directly north of Grant.

Looking to Niagara and Trenton

Muskegon operators as a group are looking to the Niagara or Trenton formations for future development of the western Michigan Field which had only one new completion in the Dundee formation during the past week. Threatened complete exhaustion of dry gas wells in the Dundee formation has been an added incentive to operators to co-operate in the plan of the Eureka Gas & Oil Co. for a 5,000-foot test to the Niagara and Trenton limestones in Section 12, Laketon Township, on the boundary between the two sections of the field. Eureka officials are attempting to raise $75,000 for the well to be drilled on the H. Hewitt and H. Buteau community lease, SE NE Section 12-10-17, Laketon Township.

Operators met last week at the chamber of commerce to discuss the best plan for obtaining a deep test on structure in the field. It was decided that rather than organize a separate company they would co-operate with the Eureka officials to raise enough dry hole money for their proposed test. Another meeting of operators will be called before December 1 to report the amount raised and to give the smaller individual operators an opportunity to join the larger companies in drilling the test.

The one new completion in the field last week was the Buckeye Oil & Gas Co.'s No. 3 Gerritt Van Loo, NW SW Section 11-10-17, Laketon Township. It is near the west edge of production in the proven field but made 350 bbls. initial in the Dundee pay sands at 2,052-56 feet. C. L. Bullock was the contractor.

Hope for Commercial Producer

In Muskegon Township the Wolverine Development Co. and Joseph A. Mesiroff have a well in the No. 1 A. Hein, SE NW Section 7-10-16, that made oil, gas and water together in the Dundee pay sands at 2,025-29 feet. It will be deepened about 5 feet this week in the hope of making it a commercial producer.

Two wells are nearing completion in the Dundee pay sands after having no success in the upper or lower Traverse. They are Fleeger-Ohlson Association's No. 2 Stanley Daniloff, SW SE Section 5-10-16, and Thompson Brothers' No. 3 Henry Smeltekop, NW SW Section 5-10-16. Each are between 1,900 and 2,000 feet deep and will be completed this week. Two others after failing to get production in the upper Traverse pay sands are drilling to the lower Traverse and Dundee. They are the Section Ten Syndicate's No. 1 J. J. Fagan, SE SW Section 10-10-16, and the Central Gas & Oil Co.'s No. 3 John Joldersma, NE SW Section 8-10-16, both on the Muskegon River flats. Each had a show in the upper Traverse.

The only new location in the Muskegon Field is V. J. Rytina, trustee, on the No. 1 Stanley Daniloff, NE NE NW Section 8-10-16, Muskegon Township. The only wildcat well drilling in Muskegon County outside the Muskegon and Laketon Township areas is Buchanan and Frye's No. 1 Fruitvale well, SW SE Section 6-12-16, Blue Lake Township. It is nearing 2,200 feet deep and operators are expecting to strike the Dundee limestone within the next week. It was dry in the upper Traverse.

Three Deep Wildcats Shut Down

Three of the deepest wildcat wells in Michigan are shut down in Ottawa County. Two of which are 4,770 and 4,735 feet deep, respectively, are the Michigan Petroleum Co.'s No. 1 C. E. Moe, SE SE Section 6-9-13, Chester Township, 2 miles east of Ravenna, and the Wright Oil Co.'s No. 1 Joseph Kluting, SW NW Section 10-8-13, Wright Township, near Conklin.

Royal R. Miller's No. 1 Paul Sako, NE NW Section 27-7-16, Grand Haven Township, near Agnew, is shut down at 4,050 feet and the rig has been moved to Cass County to start a new wildcat there for Blair & Miller, associated operators.

The Sagniaw Prospecting Co., the only concern still drilling in the old Sagniaw Field of east Michigan, completed another 15-bbl. pumper last week in the Traverse formation and took out a permit to drill another well. It was the No. 74 Spatz, SW NW Section 14-14-4e, Saginaw Township, Saginaw County, completed at 1,856 feet. The field is making about 200 bbls. a day production.

KENTUCKY-TENNESSEE

(Continued from Page 88)

6 on the Jones, Kash and Palmer farm, District 18.

In Johnson-Magoffin Counties, Paintsville Field, District 29, the Pittsburg Trust Co.'s No. 11 Milt Wheeler farm, is reported a 4-bbl. pumper. Hudson and Collins are starting No. 9 on the Hernando Grace farm, and the Hamlin-Tanner Oil Co., is starting No. 6 same district. In District 27, same counties, the Magoffin Oil Corp. is drilling No. 4 Williams heirs farm.

In Johnson-Lawrence Counties, the Boston-Southwestern Oil and Gas Co.'s No. 22 on the R. M. Sparks farm, District 32, pumped 5 bbls. from the Weir sand.

In Clay County, the Petroleum Exploration Co. drilled a light gas well on the Gardner-Baker farm, and is starting No. 1 Gilbert Baker and No. 1 Lillie Peters farm, same county.

Week's Work

A summary of the week's work in Kentucky shows 41 completions, 29 producers with an initial production of 1,272 bbls., 7 dry holes and 5 gas wells.

County—	Comp.	Oil wells	Prod.	Dry	Gas
Ohio	18	12	656	5	1
Daviess	8	7	340	1	0
Hopkins	4	1	10	0	3
Henderson	2	2	215	0	0
Lee-Owsley	2	2	7	0	0
Wayne	2	1	5	1	0
Estill	1	1	20	0	0
Christian	1	1	10	0	0
Lawrence-Johnson	1	1	5	0	0
Johnson-Magoffin	1	1	4	0	0
Hancock	1	0	0	0	1
Total	41	29	1,272	7	5

Ohio County Wells

The best completion in the Ohio County Fields was in the Barnett Creek Church lot pool, where Hupp and Duff's No. 19 Clyde Bartlett farm, produced an initial of 200 bbls. from the Stray sand at 580 feet.

To the south of Taffy, and east of the Ellis Bartlett Pool, Backer and others' test on the Kate Funk 50 acres, drilled by Daugherty, found another part of the field that developed a Stray sand, and brought in a well reported at 100 bbls. initial. This makes a nice extension to the east of the Barlett Pool, although dry holes may be found between. It means another spot that has been overlooked.

Tracy Supply Co. and others' No. 7 on the Dodson heirs 75 acres, in the Barnett's Creek Pool, showed 50 bbls. initial from 585 feet, which is the Stray sand.

Rex-Pyramid Oil Co.'s No. 15 Sallie Hoover farm, in the Barnett Pool, is reported good for 75 bbls. initial. Same company's No. 9 on the William Morgan farm, in the Morgan Pool, a short distance northwest of the Church Pool, will make a 20-bbl. producer. Same company's No. 3 Lena T. Bartlett 57 acres, in the Bartlett Pool, produced 50 bbls. initial from 620 feet.

Jas. C. Ellis and others' No. 1 in the southeast corner of the B. D. Spurrier farm, in the Deanfield area, proved a duster.

Warren Oil & Gas Co.'s No. 1 Tom H. Henning 73 acres, was dry. This well is in the southeast corner of the farm.

Louisville Gas and Electric Co.'s test on the Bob Miller farm, in the Haynesville area, and 200 feet from the north line and 1,000 from the west line of the farm, came in at 30 bbls. initial.

Brenner and Adams' last completion on the A. F. Bellamy farm, in the Deanfield Pool, is estimated good for 5 bbls.

Dr. Sirman reported a dry hole on the Cobb heirs farm, near Fordsville, at a depth of 1,000 feet.

The Ohio Oil Co.'s No. 3 on the Eula Henning farm, in the Whittaker Pool, reported at 18 bbls. initial.

J. E. Hare and others' No. 3 M. L. Howard 20 acres, Deanfield Pool, is an 8 bbl. pumper from a total depth of 405 feet, which is the Jett sand. In this well a string of 390 feet of casing was set and pay sand found 395 to 405 feet.

The well of Wade and Moore on the Henry Harrison farm, reported having 800,000 feet of gas from the Barlow sand.

Louisville Gas and Electric Co. found a dry hole in No. 3 on the P. R. Kelley 30 acres, at 800 feet.

S. H. Russell and others' No. 10 H. C. Greer, in the Deanfield Pool, produced 80 bbls. initial. In this well a string of 680 feet of casing was set, pay from 686 to 708 feet, and shot with 100 quarts.

J. M. Meredith and others set a 403 foot string of casing, got pay sand from 403 to 428 feet, total depth of 430 feet. in No. 11 on the Kelley heirs 65-acres, Deanfield Pool, which produced 20 bbls. initial after an 80-quart shot.

L. C. Young drilled a dry hole on the W. Hamilton farm, in the Barnett's Creek Church Pool.

Daviess County Wells

In the Owensboro Field of Daviess County, only a few completions were made. White & Vickers' No. 7 on the J. H. Evans farm, near Whitesville, is said to have produced around 60 bbls. initial. White and others drilled a dry hole in a second test on the J. L. Howard farm.

Evans and Garrison's No. 3 on the I. J. Clark farm, in the Utica area, reported at 25 bbls., from the Barlow sand. Same firm's No. 5 on the Davis heirs farm, in the Red Hill District, produced an initial of 125 bbls.

Kemrow and Cumberland Petroleum Co.'s No. 9 on the S. H. Easton 75 acres, in the Burton Pool, showing for 50 bbls.

Mecca Oil Co.'s No. 3 on the Zulu Johnson farm, near Habit, produced under pump an initial of 15 bbls.

Daley & Lowman's test on the B. Walters farm, a mile north of Utica, is said to show a 30-bbl. pay in the Jackson sand, which lies above the Barlow.

Eastern Gulf Oil Co.'s No. 13 on the M. C. Ruby 125 acres, Red Hill Pool, and same company's No. 13 W. A. Murray lease, same pool, are rated good for 35 bbls. each. Same company's No. 10 on the W. A. Murray proved a duster.

Scattered Wells

Missouri-Kansas Pipe Line Co. drilled in a fair gas well 1,000 feet from the south and west lines of the James McDaniels farm, in the Pellville Field of Hancock County.

In the Niagara Field in Henderson County, unknown parties' No. 1 on the C. M. Gish farm, is reported at 35 bbls. while the big well of that field drilled on the Niagara High School lot, produced 175 bbls. under pump in 13 hours.

In Hopkins County, Jesse M. Huggins' No. 1 Todd, near Earlington, reported to have made around 500,000 feet of gas at 400 feet; No. 2 about 2,000,000 feet at 800 feet, and No. 3 about 500,000 feet, at 840 feet. Ohio Oil Co.'s well on the Barnhill farm, southeast of White Plains, is about 10 bbls.

Pratt Brothers' test on the Martha Collins farm, in Christian County, is a light producer at 590 feet.

Field Pickups

G. L. Drury is reported drilling a wildcat on the Ezra French farm, 3 miles south of Uniontown, in Union County, in the extreme northwestern part of the State. This is the county where a few years ago a fair showing of oil was found in what is known as the McCloskey sand, but too light to pump at a profit.

Eastern Gulf Oil Co., is drilling No. 14 on the M. C. Ruby 125 acres, in the Red Hill Pool, of Daviess County. Evans and Garrison are drilling Nos. 6 and 7 on the Davis heirs farm, in the Utica Field, same county.

Reports from the St. Joseph Field in western Daviess County, are that the 5 producing wells there are holding up very well at 150 bbls. a day. These wells have been pumping steadily for the past few months. The bulk of the acreage in that area is held by the Creek Drilling Co., or Miller and Damron, and the company expects to start operations early in the spring and in a large way.

E. D. Fagin, oil operator of Terre Haute, Ind., and T. H. Barnett of Madisonville, Ky., are making preparations to drill on the Dr. C. L. Ledley 400-acre farm, several miles south of Owensboro, along the Livermore Road. They will test the lower formations, in hope of getting production from still lower formations than those now producing in the Tri-County Field.

Practical Suggestions in Refining

By W. T. Ziegenhain

PREFER TO PAINT NEW OIL DRUMS AT PLANTS

Refiners and the larger compounding plants prefer to paint their new barrels at the plant now and have installed equipment that will allow them to paint these drums cheaply. There is seldom any saving in painting the drums at the compounding plant compared to buying them already painted but the operation is justified on the basis that many painted drums come into the plant badly scratched and need to be repainted before they may be used.

Since most compounding plants recondition and use old drums which must be painted, the painting of the new drums calls for no duplication of equipment and helps to justify a larger and better installation. The general method of painting these is by use of the spray gun. Compressed air is usually available in the plant and it is an easy matter to extend a line to the painting room. From 70 pounds to 100 pounds air pressure is usually needed but this is dependent upon the requirements of the gun. A thin paint is preferred because it works better in the gun and naturally covers more drums.

The paint should contain a thinner that will evaporate quickly in order to hasten the drying action. The limit in time in this is the ability of the paint to deposit a good coat of coloring on the drum. The required consistency of the paint will vary for the different colors in addition to varying for the different types of guns. It is difficult to lay down any set of rules to follow in working out a method of painting drums and many things must be worked out by the operator by experimentation.

If the problem of choosing a suitable paint is left to the paint manufacturer he usually can supply one that meets the needs but the operator should not be satisfied unless he can paint from 50 to 70 drums of 50 gallons capacity per gallon of paint, if the darker colors are used, and from 40 to 60 drums when the lighter colors are used.

A convenient and quick manner of painting a drum is to set it on a rotating table and as the drum rotates the operator simply holds the spray against the side. The drum is slowly and evenly covered as the band of paint is widened, starting at the top.

Speed of Table

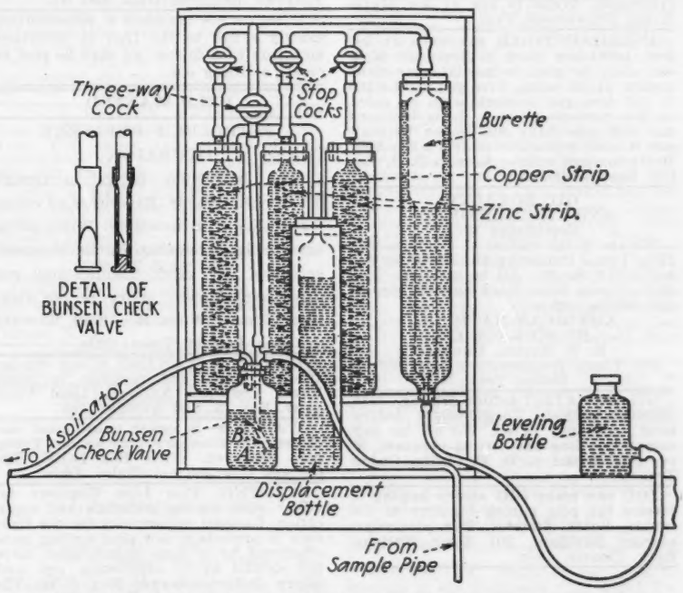
This table may be motor driven or may be revolved by hand. A motor driven table revolving about 100 revolutions per minute is found to be a convenient speed. If the table is not motor driven it is usually constructed to rotate easily. In that case the operator simply gives the drum a whirl when it is placed in position and he is usually able to complete the job of painting before it stops.

It is preferable to set the table only slightly above the floor level so the operator will not have to lift the drum but may roll it onto the table. The top of the table should be round, and small enough in diameter to fit inside the rim, so when the drum is rolled on the table, the operator can feel it slip into place. After the sides of the drum have been painted, the operator paints the top without removing it. Then the operator pulls the drum off the table toward him and lays the drum on its side. A short piece of 1-inch angle iron, bolted to the floor at a convenient place, serves as a fulcrum for the side of the drum to rest on while the operator takes hold of the bottom rim to turn the drum bottom side up. The angle iron keeps from laying the drum on the floor and minimizes the damage to the fresh paint. The little spot

(Continued on Page 146)

TENTATIVE CODE FOR TESTING FUEL OIL OUTLINED BY A.S.M.E.

A tentative code for testing liquid fuels has been formulated by the American Society of Mechanical Engineers for open discussion at the public hearing in New York City December 2. This code is not intended to conflict with the test procedure adopted by the United States Government for the testing of fuels purchased for its use as outlined in the Bureau of Mines Bulletin 323-B nor is it intended to interfere with the usefulness of the specifications and test procedures adopted as standard by the American Oil Burner Association. In each of these cases the principal object was to outline a complete set of tests which would guarantee the purchase of satisfactory fuels for definite purposes. These specifications were designed for use in marketing the oil. The code proposed here includes determining those properties of the various fuels which are of importance in power tests.



Orsat apparatus for the testing of flue gases to determine the completeness of the combustion of the fuel and the efficiency of the installation.

Classification of Fuels

The code classifies the fuels into distillates and residual fuels and subdivides each of these into three classifications. The distillates are divided into (1) volatile products such as gasoline, motor benzol, etc., (2) semivolatile fuels such as kerosene, furnace oils, tractor fuels, and (3) nonvolatile fuels such as gas oils, the usefulness of which depends upon its low viscosity and minimum tendency to form coke or tar in use. The residual fuels are divided into three classes (1) low viscosity fuels which may be pumped and atomized at atmospheric temperatures, (2) medium viscosity oils which may be pumped at normal atmospheric temperatures but which require preheating for efficient atomization, and (3) high viscosity oils which usually require preheating both for pumping and atomization.

In assembling the complete code, many of the tests as outlined in the Bureau of Mines Bulletin 323-B and those accepted by the A.S.T.M. were also accepted as tentative for adoption here but the code elaborates on certain points. These only will be discussed here.

The code comments as follows on the question of, determining the calorific values of fuels: "The calorific value shall be stated as total heating value. The calorific value of all liquid fuels except those distillate fuels listed in the first classification as volatile products such as gasoline, motor benzol and alcohols, the usefulness of which primarily depends upon the ease with which they may be vaporized, shall be determined by A.S.T.M. Method of Test for Thermal Value, Serial Designation D240-27.

"Volatile products such as those of Group A-1 present difficulties due to the impossibility of weighing them accurately in open containers. No entirely satisfactory procedure has been developed for these products. The general procedure of Richards and Barry[1] is the most accurate that has been devised, provided a slight modification is made in the method of filling bulbs. Richards and Barry recommend filling by the conventional method of heating and cooling, which obviously is not suitable for complex mixtures of hydrocarbons, although entirely correct for the pure liquids with which they worked. Filling by means of a capillary tube injector overcomes this difficulty.

"The disadvantage of the Richards and Barry method lies in the fact that blowing and sealing the bulbs requires manual skill beyond that which the average routine analyst possesses. Another method, which is described by Strong and Stone,[2] involves the use of gelatine capsules, and does not require the special skill in glass-working which is essential with the Richards and Barry method, but it presents other difficulties.

"It is more or less common practice to calculate the calorific value of petroleum fuels by the use of the formula,[3]

$$\text{B.t.u.} = 18{,}650 + 40\ (G - 10)$$

Where

G = gravity of oil in ° A.P.I.

in which B.t.u. signifies British thermal units per pound of fuel and G the gravity of the oil in ° A.P.I. This formula is not applicable to all petroleum products, but for distillate fuels it yields results which are close approximations and for volatile products its use is frequently justified by the experimental difficulty of the calorific determination."

The code comments as follows regarding the use of gravity specifications:

"Gravity figures are widely used in purchase specifications for petroleum products and are universally undesirable in this connection. On the other hand gravity is an important physical property in the case of power tests, as it is frequently desirable to know both the weight and the volume of fuel that has been used."

Ash Content

No specific methods have been standardized for determining the ash content of liquid fuels, as the procedure involved permits considerable variation without affecting the accuracy of results. The following procedure will in general be found satisfactory:

"Thirty to 50 grams of the oil is weighed into a tarred platinum dish. Unless the product can be ignited at atmospheric temperature it is heated cautiously until it will burn and is then set afire. The rate of burning generally slows down after the oil is partly consumed and when this occurs heat is applied cautiously. After the oil is consumed, the residue is ignited either over a flame or in a muffle furnace until the carbon is completely consumed. The dish is then cooled in a desiccator and weighed. If a platinum dish is not available or if there is any reason to believe the fuel contains heavy metals a silica dish is employed. A shallow dish or crucible is preferable as it makes it easier to burn out the refractory residue of carbon.

Determine Carbon and Hydrogen

"The apparatus and procedure are the same as that described for the determination of carbon and hydrogen of coal and coke by an electrically heated combustion furnace as given in the Standard Methods of Laboratory Sampling and Analysis of Coal and Coke of the American Society for Testing Materials[4] with modifications of procedure to prevent too rapid volatilization of the oils. The electrically heated

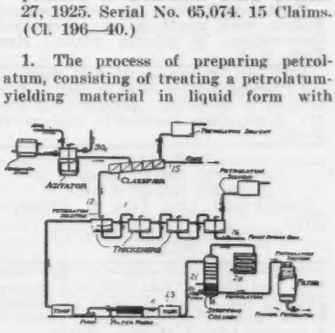
[1] Journ. Am. Chem. Soc., 37 (1915), pp. 993-1,029.
[2] Bureau of Mines Bulletin No. 43.
[3] Journ. Am. Chem. Soc., 30 (1908), p. 1,626.
[4] A.S.T.M. Standards, 1927, pp. 556-560.

(Continued on Page 146)

Recent Patents

1,733,597. Process and Apparatus for Making White Petrolatum. August Holmes, Newark, N. J., assignor to Standard Oil Development Co., a corporation of Delaware. Filed October 27, 1925. Serial No. 65,074. 15 Claims. (Cl. 196—40.)

1. The process of preparing petrolatum, consisting of treating a petrolatum-yielding material in liquid form with



fuming sulphuric acid at an elevated temperature until undesirable constituents of the material are converted into non-liquid undissolved carbonaceous bodies suspended in the liquid, treating with a solvent for petrolatum the residual liquid and the carbonaceous bodies together, and recovering purified petrolatum from the solution.

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11 MILES 12" O.D. PLAIN END PIPE
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CAPITAL security issues placed. Issues susceptible of underwriting negotiated. Specialized service. Write, Barrick, New Martinsville, W. Va.

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Oil located by secret eastern method. Success guaranteed, or fee returned. E. A. Wilson, 214 South Cheyenne, Tulsa, Okla.

OUR EUROPEAN OIL FINDER is available for making drilling locations. The manufacturer of this instrument guarantees successful drilling locations. D. C. Oliphant, 19 West 44th Street New York.

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HEAT TRANSFER equipment manufacturer desires Sales Engineers, Calculating Engineers and Designers experienced in the Power Plant, Petroleum Refrigeration and Industrial Fields. Excellent opportunities for proper applicants. Give full information in first letter. All replies considered strictly confidential. Write Heat Transfer Products, Inc., affiliated with American Locomotive Company, 30 Church Street, New York City.

DRAFTSMAN. Age 26-35, Technical Graduate, with experience in design of general oil refinery apparatus such as stills, condensers, fractionating columns, piping, etc. State age, experience, and education. Location, Philadelphia. Write Box E-24, The Oil and Gas Journal, Tulsa, Okla.

WANTED: Civil Engineer with Refinery experience by Producing, Refining and Marketing Company, operating in Mid-Continent and located in city of 100,000. Address Box E-23, The Oil and Gas Journal, Tulsa, Okla.

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Gasoline Stronger in Chicago Area

Surplus Quantity of Product Disposed of and Stocks in Hands of Jobbers Believed Low. Many Ask for Prompt Shipment

By John B. Waldo

CHICAGO, Nov. 25.—Refiners who were moving their U. S. Motor gasoline last week at prices which were intended to secure business report that they have sold their quotas of this distress gasoline and are now out of the market. Two of these were in differential territory and the net on their quotations was much better than the prices would indicate based on Group 3 delivery. Just how much they hold is unknown but they took care of the immediate needs of quite a few jobbers. This material was not available for shipment to all parts of the territory but the freight costs which made the prices when delivered so reasonable applied to considerable parts of the territory.

The market this morning, though rather inactive as to spot sales, was a little stronger and the low quotation for U. S. Motor gasoline based on Group 3 deliveries was 6¾ cents, which price was occasionally shaded to 6⅝ cents. The low condition of jobbers' stocks was indicated by the demand for cars in transit. Orders on contracts were quite liberal and many orders contained instructions for prompt shipment. The major refiners were asking 7¼ cents for spot U. S. Motor gasoline.

The kerosene demand today was small. Colder weather in parts of the territory brought in some rush orders for furnace oil from spot buyers and instructions on contracts were fair in number although the orders were generally small.

The gas oils were in much better demand than distillates. The latter are still rather easy in price while the zero gas oils of the better grades are growing a little stronger.

The movement on fuel oils is good, many instructions being received today. The spot demand and that from buyers who order for a month was light today. Bright stocks were being offered at resale at less than the prevailing market, the sellers being concerns who have the balance of their contracts to move before the end of the year.

Refiners Reduce Price

During all of last week, the price of U. S. Motor gasoline in this market, continued to sag until at the close of the week the larger refiners who had been holding for 7½ cents were forced to reduce their price for spot gasoline to 7¼ cents.. They have been doing almost no spot business and it is a question if the cut is sufficient to enable them to do much, for the new price is still well above the quotations made to the jobbers by other refiners and by the local and Tulsa brokers.

The local marketers began the week by trying for a price on U. S. Motor of 6⅞ cents, but were forced through the direct offerings of refiners to the jobbers at lower prices, to reduce their quotation to 6⅝ cents and found that they were meeting with competition from refiners at 6½ cents and less.

Several sellers of gasoline stated that they would be glad to take on orders at the 6½ cent price. The range between the quotations of U. S. Motor gasoline is still too wide for a stable market and it is obvious that either the low price must be advanced or the top price, which at this writing is 7¼ cents, will fail to gain its objective, namely more spot orders for the major refiners.

Several Indications of Weakness

There were several indications of the weakness of the situation in the local market. One was the purchase of its monthly requirements by the city of Detroit, at 9¼ cents delivered. The low bidder was one of the East Chicago plants and at that price the net back to the refinery will be 8 cents, while the net to the Oklahoma refiner would have been a trifle less than 5⅝ cents group 3. Now, according to available reports, the refiners in the Middle West group and especially those in the refining district in the Calumet region just outside the southern limits of Chicago, are in much better shape to hold gasoline than the Mid-Continent rivals. They are not increasing their stocks and have only moderate inventories on hand. This favorable condition is due in a great measure to the sales advantages which they enjoy from their location combined with a pipe line connection.

The advantage which this location gives is shown by the growth of the refinery at Lamont near Chicago. This refinery was built several years ago and originally was equipped to run as a cracking plant using a special process designed by the plant superintendent. It was operated only intermittently. Since it was taken over by the Globe interests it has been operated at capacity on Muskegon crude. The difficulty and expense of refining this crude as well as the dwindling suuply have made the Globe management obtain a pipe line connection. Experience with Muskegon crude has convinced the management of the advantages which they will enjoy from a sufficient supply of desirable crude coupled with the proximity to the great consuming demand which centers in this district.

Order Filled at Low Figure

Another order that went at a low figure to a local refinery is that of the Benzolene Motor Fuel Co., whose monthly order for 100 cars was placed last week at a price not stated, but which is believed to have been below 6½ cents. One of its regular refiners bid 6⅞ cents and was informed that his price was one-half cent too high. Another bid was made by a local refinery of 6¼ cents which also did not land the order. The Chicago post office is asking for bids for its supply of gasoline for the motor vehicle department for the first quarter of 1930. These bids will furnish an excellent indication of the ideas of refiners as to the future of the gasoline situation.

Jobbers stated at the close of last week that they had bought really first-class material at 6⅜ cents. Several made this report and there is no doubt that the purchases were made at that price and some special deals have been understood to have been made at lower figures but they were for distress material.

The jobbers are buying just as little gasoline as it is possible for them to do business on. They are not buying for any future demand. Those who have contracts are taking a fair amount of their committments, but they are not taking all that the contract calls for in some cases. Some of the local offices say their customers are taking practically all of their contract quotas but others admit they are not getting the full amounts by 10 to 20 per cent.

Cold Weather Reduces Consumption

The last half of last week was cold and blizzardy and gasoline consumption fell off over all the territory with small exceptions. The colder weather stimulated the demand for the higher tests and there was call for 60-62 endpoint and for the 375 endpoint gasoline. The result was that prices on these grades held their own, the supply being rather well controlled as the result of export orders.

The sale of Ethyl Gasoline is surpassing the expectations of some of the largest distributers. The Standard Oil Co. here is reported to have doubled its former business since it brought out its new Ethyl Gasoline in which the base gasoline is practically a good 60-62 400 endpoint. Many now are using that gravity as the base for their Ethyl Gasoline and some are making their white gasoline a 64-66—375 endpoint. It is asserted by some refiners that the use of natural gasoline in the blend adds to the antiknock value of the gasoline and enables them to meet the requirements as to antiknock value with the use of less ethyl fluid in the blended material.

Kerosene Weak and Dull

Kerosene is weak and dull. Some refiners in the last week have asked when they might expect the next demand for kerosene. The answer is that it will come next spring when the ground is in shape for the use of tractors to do the spring plowing. There is of course a little demand for kerosene for lighting in some remote districts but in any fairly well settled region there are electric light plants serving many small communities as well as individual small electric installations and other means of getting illumination during the winter months.

Kerosene is being offered here on the "write your own ticket" basis by refiners in Ohio as well as in Oklahoma. Every refinery seems to have kerosene which it wants to sell. In one instance an Ohio refinery called a marketer and told him that he had a surplus of high-gravity, low-flash, doctor and corrosion test kerosene which he wanted to have moved. The marketer asked at what price he wanted to sell the kerosene and was told to forget the price but to sell the material.

Kerosene has been offered for resale and direct to jobbers at 4⅛ cents and there is little doubt that a real order would be filled at 4 cents. Kerosene which will meet the specifications of 42-44 gravity is being sold at the price of the 41-43 product. Probably some kerosene will find its way into the distillate tanks and add to the supply of this material. There is little demand and an excessive supply and according to reports an increasing quantity in refiners storage.

Livelier Demand for Distillates

The severe cold spell of last week with its sub-zero temperatures made a noticeable increase in the consuming demand for distillates. Consumers with small storage were the ones to order. The buying by local distributors was light, most of them having ample supplies as well as material bought that has not been shipped to them. A few had cars on their tracks and they were anxious to have more room to be able to stop the demurrage charges. There was some demand from the country for cars to be shipped against contracts and a little inquiry for cars in transit, but the cold weather did not last long enough to bring about a general movement or any material increase in the buying. Prices were unchanged with possibly a little firmer tone due to this evidence that it was really winter.

Most of the refiners have distillate. Some are holding for their price, but most of these have their own distribution or contract customers to look out for and they realize that the worst of the winter is yet to come. Other refiners are anxious to move some of their stocks and they have been making lower prices than prevailed earlier in the season. Good 38-40 distillate could have been bought at 3⅜ cents last week and some sales were made to distributors at that price. One large distributor stated that he was still running on distillate which cost him 2¾ and 2⅞ cents groupe 3. One was shipping distillate during September and October which had been sold to customers at 3 to 3¼ cents. There probably were others. This naturally has a tendency to hold the market from much higher prices than rule at present. Only a real scarcity due to excessive cold over long periods will have the result of bringing about a really strong market for distillates.

Gas Oils Firm

On the other hand the gas oils are firm at former prices. Supplies are not freely offered although they have been a little easier to buy of late but there is a fair demand all things considered and the market seems to be in pretty good shape. The straightrun gas oil which will meet the U.G.I. specifications is being held at 2⅞ cents. The Shell people who have had some gas oil for sale at that price report that they are again out of the market. The oil which was to be bought at 2¾ and possibly at 2⅝ cents has disappeared and many are now calling the actual market to the users for a straightrun 32-36 gas oil with not over 1 per cent sulphur as firm at 3 cents.

There is gas oil available at less, some of it 30-34 gravity and some a little less and some of full 32-36 gravity with too much sulphur, and these can be bought as low as 2¾ cents. Possibly even that price might be shaded.

The gas companies are buying for their needs only and many have stocks or contracts covering their requirements. As to the zero gas oil there is a difference of opinion as to the real price which is based for the most part on variations in specifications. A straw gas oil is offered by one seller at 3¼ cents any other straw gas oil has sold in the last week at 3½ cents, but the latter was a light straw with a zero cold test low flash and really sweet and desirable in every way.

Same With Dark Gas Oils

The same condition prevails in the dark gas oils, but the good material that would be considered desirable by every buyer should bring 3¼ cents although some 32-36 zero dark gas oil is being sold at 3 cents. Right here it should be stated that some of the furnace oil offered for sale is really desirable in all respects except that it has a little off odor.

Smelling Not True Test

Smelling the sample, the buyer would probably say that it was all right. Yet these oils make a lot of trouble especially in the cases of oil burners with inside storage. The odor seems to increase the longer the oil is used until it becomes almost unbearable. Just what test can be used to determine if a gas oil or distillate is going to prove objectionable in use with indoor storage is hard to say. Some try dropping a little of the oil on a blotter and in this way getting a better idea of the odor than can be obtained by smelling a sample in the bottle.

The demand for the zero oil was quickened a little by the cold spell of last week, but while the demand is better than for distillates, the demand was limited and for the same reasons that applied to distillates.

Heavy Industrial Fuel Oils

The movement of heavy industrial fuel oils continue good and is increasing rather than falling off. The December requirements have not been sought by many of the montly buyers yet but they may show some increase over November. Prices are holding firmly. There is more oil being used for heating for one thing and the decision of the industrial leaders not to let the activities of the industries slump as a result of the stock market de-

(Continued on Page 146)

Refined Oil Prices Are Steady in East

Consumption Holding Up Well and Indications Are There Will Be but Little Change in Quotations During Balance of the Year

By A. E. Mockler

New York Bureau, The Oil and Gas Journal, Rooms 1919-21, No. 154 Nassau Street

NEW YORK, Nov. 25.—Refined products, with the exception of several grades of lubricating oil, have remained in steady position in East Coast markets throughout the week, with a fair volume of business reported.

Gasoline markets over the past several weeks have been in well stabilized position, and the outlook indicates a steady tone for the balance of the year. Kerosene is in the same position and fuel and gas oils also appear to be well held.

Gallonage in all of the major products has been very satisfactory this year, insofar as East Coast refiners are concerned, and notwithstanding the several flurries of price competition which developed in certain parts of the territory at times, the year will go down as an exceptionally good one, from both the sales and profit standpoint.

Refiners do not anticipate any change in the general situation over the balance of the year, and are now concentrating their activities in lining up the situation for the first half of the coming year. The material improvement in the crude situation, from the standpoint of an amelioration of the overproduction situation is regarded as a most hopeful development.

Tank Car Gasoline

Both California and South American gasoline is arriving in East Coast distributing markets in fairly heavy volume, but these outside supplies are moving into consumption without disturbing the price basis in this area. Leading refiners continue to quote U. S. Motor on the basis of 8¾ cents per gallon, and it is not expected that any early change in the price structure will be made.

Jobbing demand is easing off slowly, and while a further drop in consumption is looked for before the end of the year, it is evident that the market will not witness the sharp drop in demand noticeable in former years. In fact, gasoline distribution is becoming more of an evenly-balanced year round proposition from year to year, as the use of passenger automobiles throughout the winter season becomes more general.

Distributors are beginning to curtail their operations somewhat, and showing less disposition to keep their storage full. In most instances, jobbers are keeping just enough gasoline on hand to take care of two or three days' requirements, keeping a tank car rolling to take up the slack as stocks are moved into distribution.

There is some talk heard regarding December bookings, and while it is too early for definite predictions, it appears likely that the present quotation of 8¾ cents at refineries may hold for the balance of the year.

Tank Wagon Gasoline

Quotations are without change in this area, following the readjustment made during the previous week by marketers in Pennsylvania and Delaware. Demand is holding up fairly well, although movement is a little under that at this time last month.

Distributors in this area are greatly interested in the plan of Standard Oil Co. of New Jersey to distribute gasoline from its Bayonne refinery via pipelines, as outlined in The Oil and Gas Journal of November 14. This development is a radical one, and progress is being watched with considerable interest by the trade in the area which will be served in this manner. Pipe line delivery, it is felt, will offer a more reliable and sustained delivery service than any now available through the usual channels.

Kerosene

Refiners continue to quote water white in tan car lots unchanged at 7¾ cents per gallon at refineries, and a good volume of business is being done at that figure. Jobbers are ordering forward shipments in fair volume, and the outlook continues favorable. An improvement in the export demand has strengthened the market position in the East.

Tank wagon demand for kerosene is seasonably active, and prices are well maintained by principal distributors in the East Coast area. The market is expected to continue at the present level for the remainder of 1929, with no prospect of any revision in the tank wagon schedule during the early part of the new year.

Furnace Oil

A stronge undertone rules, and while there has been some talk of an increase in prices on the higher grades, no change in refiners' schedules has been made as yet.

Principal marketers in this area report that their furnace oil volume is running considerable in excess of that for the corresponding period last year, with every indication that the sales total for the season will establish a new high record in gallonage.

Reports concerning furnace oil installations indicate that a good volume of business is still being done, although it is felt that the recent bad break in the stock markets may be reflected in a slowing down in this division of the market.

Lubs

Bright stocks have worked into easier position again. Light bright stock has sold at 57 to 58 cents per gallon, off 2 cents, with dark bright stocks correspondingly lower at 56 to 57 cents per gallon. Warren 60 "E" is down a half cent at 40 cents a gallon, with Oil City 600 "E" also down a half cent at 39 cents per gallon. Cylinder stocks are firm at last week's levels. A sale was reported this week of 600 steam refined at 27½ cents per gallon in the field, equivalent to 35½ cents at New York, barreled, 2½ cents over the currently-quoted price. The oil in question, however, proved to be a premium grade of filtered stock. Domestic buyers were operating along rather conservative lines this week, and large-lot trading was absent. Export operators were also limiting their purchases to small lots in most instances.

Spot movement of red and pale oils has been well maintained this week, and the market is in steady position on all grades. Domestic buyers are ordering stocks forward in fair volume, although there is some tendency evident to limit purchases to nearby wants in order to avoid the necessity of carrying large stocks at inventory-time at the close of the year.

Wax

A moderate inquiry for fully refined wax is reported this week, with the market holding unchanged on all grades. A little softness is still in evidence, and price shading is by no means a rarity.

Refinery holdings of wax are large, and some refiners are willing to make slight concessions in order to move accumulated stocks. Export inquiry has continued along rather quiet lines this week, and this, in connection with current quiet in domestic demand, has gone to make it a quiet week in wax.

Diesel Oil

Satisfactory demand for Diesel oil is reported this week, and leading refiners continue to hold the market unchanged at $2 per barrel in bulk, f.o.b. principal East Coast refinery terminals. Marine consumption is accounting for the large bulk of the business, and sales are substantially ahead of last year's totals. The contracting season is at hand, and refiners are now booking business on Diesel oil for 1930, generally on the basis of the current quotation, which has held all of 1929, thus far. Indications do not point to any change in the price basis during the remainder of the year.

Domestic industrial demand for Diesel oil is slowly broadening and it is expected that 1930 production will be increased further. Numerous reports of successful operation of Diesel motors for airplanes have been heard in recent weeks, but the general feeling in the industry is that aviation demand for Diesel oil, as a quantity proposition, is still some time off.

Low-grade Diesel oil is moving readily to jobbers as furnace oil, and production in the East Coast area is being supplemented by shipments of distillate from California into this territory. A heavier movement of the Pacific Coast product eastward is looked for during the balance of the season, owing to the relatively low prices for Diesel oil quoted by California refiners.

Petrolatum

A steady undertone has continued in evidence throughout the past week, and there has been a fair movement, both into domestic consuming channels and for shipment abroad.

Lily white and snow white are still leading in demand, insofar as the domestic pharmaceutical manufacturing trade is concerned, although there is a slight improvement noted currently in the call for the lower grades for industrial consumption.

Foreign demand for petrolatum is also a little better, and sellers look for steady improvement in export trading over the balance of the year. Refiners are showing firm price views on all grades, and current quotations are being well maintained. Efforts on the part of some buyers, notably in the export branch of the market, to bring to light off-priced offerings of petrolatum, are not meeting with much success at the moment.

Fuel Oil

Bunkering business continues heavy, and the market for bunker "C" remains steady and unchanged at $1.05 per barrel, plus 5 cents per barrel for lighterage alongside within the harbor limits. Volume for the year will show a material increase over 1928, notwithstanding the growing trend toward construction of Diesel-powered vessels on the part of many of the leading marine companies.

The bulk of current business consists of deliveries against standing contracts, and a substantial percentage of the marine business for 1930 is already on refiners' books on long-term contracts. While stocks of fuel oil held at East Coast refineries are not excessive, heavy holdings at other points, notably in California, tend to make the statistical position of the market rather easy. In addition increasing competition is to be expected from the Royal Dutch and Pan American plants at Aruba, Dutch West Indies, both of which are now doing a substantial volume of fuel oil business. All of this, it is felt here, precludes the possibility of any early advance in the market quotation for bunker "C" oil.

Gas Oil

Conditions in this division of the market were much the same as during the several preceding weeks. There is a good contract movement of 32-36 recycled gas oil on the basis of 5¼ cents per gallon, at refinery terminals, with some oil moving out at a quarter cent per gallon under this figure.

Refiners are getting their sales campaigns for 1930 in shape, and it is probable that contract business for the new year will be written on a basis close to the prevailing spot price. Marketers are moving gas oil in good volume against furnace oil contracts, many of the older types of domestic installations requiring a rather high grade of oil for successful operation. Small stocks of gas oil are reaching East Coast distributing points from California, and it is expected that this movement will continue in force throughout the winter season.

Export Markets

Gasoline has continued rather active in export markets this week. In addition to the three cargoes placed late in the preceding weeks, another cargo, reputedly involving between 6,000 and 8,000 tons of 64-66, was booked for France early this week. At the time of writing there are two inquiries in the market for shipment to France. The first, for 10,000 tons, involves 3,000 tons of prime white kerosene and the balance Navy and 64-66 gasoline. A second inquiry, for a 6,000-ton cargo for France, involves Navy and 64-66. Both cargoes are reported for December loading.

The recent purchase of substantial quantities of gasoline in the Mid-Continent area by the export association has strengthened the market position considerably, and current export gasoline transactions are reported going through on the basis of the association schedule. Increasing sales of Soviet gasoline in Great Britain are tending to cut down American shipments to England, although American companies with British marketing affiliations are doing a substantial volume of business.

While no official announcement has been made by the export association, it is reported that a number of matters pending affecting the organization's price policy have been amicably adjusted, and it is expected that the association will go forward more rapidly in its plans for the completion of the organization of the country's export petroleum trade.

Locally, there has been a moderately active market for refined products for export. Gasoline and naphtha have sold in good volume, and a better inquiry for gas and fuel oils is noted. Lubs, however, continue in rather quiet position, and the same is true of wax. Kerosene sales are holding up well. It is expected that several cargoes of gasoline, which would normally move out through the Gulf, may be expected to go out from East Coast refinery terminals during the remainder of the year.

Petroleum Exports

The following table shows principal exports of refined petroleum products from New York during the past three weeks (all figures in gallons unless otherwise noted):

	Week ended		
	Nov. 16	Nov. 9	Nov. 2
Gasoline	21,000	354,200	790,100
Naphtha	798,600	494,300	303,400
Kerosene	232,000	150,000	45,700
Fuel oil	932,000	10,100	262,800
Lubricating oil	1,416,800	705,900	871,500
Petrol'm, refined	534,500	4,619,800	1,443,900
	Pounds		
Petrolatum	32,600	127,200	53,000
Paraffin wax	887,300	1,301,400	2,528,600
Refined	25,000	12,000	179,000
Scale	945,200	97,000	437,300
Lubric'tg grease	1,518,200	870,800	631,300

Imports

Imports of crude and refined petroleum at the principal United States ports for the week ended November 16 totaled 2,005,000 bbls., a daily average of 286,428

(Continued on Page 146)

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Natural Gasoline Manufacture

CARE IN OPERATION OF STEAM PUMPS NECESSARY

By B. F. Spigener*

Before starting a pump or steam engine, all oil cups and lubrications should be filled with the proper lubricant.

The cylinder relief cocks should next be opened. The cylinder may be warmed up by slightly opening the valve. The main thing to guard against is excessive condensation in the cylinders, because of danger to the cylinder heads.

Water is an unyielding substance, when it fills the cylinder, and is acted upon by a fast approaching piston, it causes a shock to the cylinder head and moving parts, as well, and in extreme cases even though the relief cock be open there is danger of damaging the engine. Accordingly, in starting any engine steam must be admitted very gradually in order to avail any excessive steam on the cylinder head and moving parts.

On opening the throttle a knock at the end of each stroke indicates water hammer due to excessive condensation, if this occurs gradually close the throttle valve or do not open any wider until the knocking ceases. After the pump has been brought to speed, the relief cocks may be closed. After the pump or engine has been started attention should at once be given to the various oiling devices to see that they are feeding at a proper rate.

Engineers, as a rule use too much oil in the cylinder, and it is safe to say that only those in charge of condensing plants, where the condensate is returned to the boilers appreciate how small a quantity of oil will suffice. In any plant excess cylinder lubricant should be discouraged because of the expense.

Proper Lubrication

Since a lubrication is used for removing friction where two parts are under pressure, it is evident that under certain conditions and pressures different fluids will give different results, and in order to lubricate properly it is necessary that the conditions of both the rubbing surfaces and the lubicant be considered, as well as the pressure between the moving parts.

In order to lubricate properly, the lubricant, when between the bearing must be a fluid enabling it to flow freely when the bearings are close fitted and under heavy pressure. The adhesive properties, or those that cause the oil to adhere to foreign bodies, must be good so that it will stick to metallic surfaces.

The flash point must be above any temperatures that may arise in the bearing. By flash point is meant the temperature to which the oil must be heated in order that the vapors arising from it will momentarily blaze when a flame is passed through them.

The most common sign that something is loose about an engine is "knocking" as it is called. If any bearing wears or any fastening becomes loose, the machine will begin to knock. In such case, the engineer should locate the knock at once, find out the cause, and remedy same at the first opportunity. Knocks are caused by looseness, or interference. In making adjustments care should be taken not to make the adjustment too light.

If a box heat in the least degree it indicates that due to lack of oil or some other reason the metals are wearing together and the first attention is to provide plenty of oil. If flooding does no good, take the bearing apart and clean it thoroughly; then apply a coat of white

(Continued on Page 147)

*Columbian Gasoline Corp. Plant Foremen's Meeting.

Who's Who
IN NATURAL GASOLINE MANUFACTURE

PHILLIPS PETROLEUM CO.

The Phillips Petroleum Co. of Bartlesville, Okla., is not only the largest manufacturer of natural gasoline in the petroleum industry but it also occupies an equally important position in marketing including the development of new products.

The company's rapid expansion in natural gasoline manufacture dates from 1923 and its leadership has never been seriously challenged since that time. At present the company is operating 43 plants with a rated capacity of 1,131,000 gallons and an actual output close to 800,000 gallons daily. This exceeds the output of its closest competitor by at least 50 per cent.

The operations of the company are confined to the Mid-Continent Field. Thirty plants in Texas have a capacity of 838,000 gallons daily, 11 in Oklahoma, 273,500 gallons, one in New Mexico, 9,000 gallons, and one in Louisiana, 10,500 gallons. The company's expansion in the past four years has centered in the Panhandle area of Texas. The company has large production holdings in that section with gas supplies which have furnished the raw material for a steady expansion in plant capacity. Within the past few months the company has completed four plants in Gray County and one in Carson County of the Panhandle area. These five plants have a combined capacity of 250,000 gallons daily.

In connection with its manufacturing operation the company for several years has carried on considerable research work covering the constituency of natural gasoline and outlets for new products. Through the perfection of manufacturing methods the company has been able to secure a close separation of hydrocarbons of which the natural gasoline is composed. This has improved the regular grades of natural gasoline and has also given the necessary material for special products.

Through a subsidiary company, the Philfuels Co., a large market for some of these products has been developed. These include domestic fuel, industrial fuel, gas enrichment fuel, solvents and gas machine gasoline. These special products to a large extent are manufactured from the lighter hydrocarbons which are wasted in the usual method of plant operation.

The company also has pioneered in the development of a motor fuel containing an exceptionally heavy per cent of natural gasoline. The company operates a refinery with a capacity of 9,000 bbls. daily. The refinery gasoline is blended with natural gasoline to secure a product of established specification which is sold both through its own stations and to the jobber trade. The volatility of this product exceeds the ordinary domestic grade of motor fuel and a wide market has been developed. The company has also developed a special grade for airplanes in its natural gasoline operations.

Despite the large utilization of natural gasoline within its own organization, the Phillips company is still the largest tank car seller of the regular grades. To handle this business the company has a large fleet of insulated tank cars. Its products during the course of a year are sold to the principal domestic buyers and export outlets have also been developed. The company has the largest storage facilities of any natural gasoline company. Storage tanks are of special construction. A recent report showed a storage capacity of 35,000,000 gallons.

Both the manufacturing and sales operations center at the general offices of the company located at Bartlesville. F. E. Rice is general superintendent of the

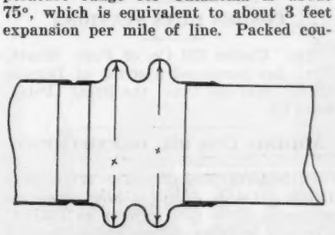
(Continued on Page 147)

First of a series of articles describing briefly the operations of the major manufacturers.

A PRACTICAL SUGGESTION

AN EXPANSION JOINT

Pipe lines contract and expand with temperature changes and if provision is not made to take care of this condition the lines will part or buckle. The temperature range for Oklahoma is about 75°, which is equivalent to about 3 feet expansion per mile of line. Packed couplings and long sleeves are used. It is also customary to lay pipe in a ribbon manner in a ditch which is called slack. There are no set rules on the amount of slack to allow, and the amount depends upon the judgment of the construction man in direct supervision of work.



Expansion joint.

A unique expansion joint has been evolved and is being fabricated by at least two manufacturers of line pipe. Several of the recently constructed lines have used the joint. It has two or more corrugations and functions somewhat like a bellows.

This expansion joint is welded into the line and carries an internal sleeve as a reinforcement. In addition to being welded to the ends of the joints of pipe, between which it is located, it is also welded or tacked one place on the liner or sleeve. In a 10-inch line a test was made recently which showed an enlargement in diameter at X (in sketch) of approximately 1.5 inches.

This joint is the result of the recent improvements in making curved pipe devices like tube turns. The original thickness of the metal is retained at the corrugations in the shaping machines. This expansion joint has also another application, that of making bends in lines of large diameter. In making bends, the liner is removed and it has the advantage of permitting the bends to be made in shorter radii and also by ordinary field equipment.

Practical suggestions by those connected with the construction and operation of natural gasoline plants are invited. Payment will be made as soon as suggestions are accepted. Address all communications to the Natural Gasoline Department, The Oil and Gas Journal, Tulsa.

ARKANSAS NATURAL NOW OPERATING EIGHT PLANTS

Several changes have been made by the Arkansas Natural Gas Corp. in the operation of its natural gasoline plants. These changes include the plants of the Arkansas Fuel Oil Co. and the Reserve Natural Gas Co. of Lousiana which are affiliated companies under the same general management. Controlling interest in the Arkansas Natural Gas Corp. is owned by the Cities Service interests.

The Arkansas Natural Gas Corp. is now operating the following plants: Section 36-18n-1e, Ouachita Parish, Louisiana 8,000 gallons daily; Section 24-15-17w, Ouachita County, Arkansas, 10,000 gallons; Section 31-17s-15w, Union County, Arkansas, 10,000 gallons.

The Arkansas Fuel Oil Co. owns and operates the following plants: Section 24-21n-8w, Claiborne Parish, Louisiana, 2,000 gallons; Section 3, Prairie Township, Crawford, Illinois, 2,000 gallons; Section 18-20n-15w, Caddo Parish, Louisiania, 500 gallons.

The following plant is operated by the Reserve Natural Gas Co. of Louisiana: Section 10-17n-14w, Caddo Parish, Louisiana, 10,000 gallons.

INSTALL EXPERIMENTAL FIELD IN AUSTIN AREA

HOUSTON, Tex., Nov. 23.—Humble Oil & Refining Co. has just put in operation in the Raccoon Bend Field, Austin County, an experimental gasoline plant. The plant, of the compressor type, has a capacity of from 3,000,000 to 4,000,000 feet of gas daily. This is one of the few gasoline plants which ever have been built in coastal fields as these fields ordinarily do not produce gas in sufficient quantities. Raccoon Bend is one of the few coastal fields which yields gas as well as oil.

As the gasoline content of the gas at that field had not been considered enough to justify a gasoline plant, the gas formerly had been run direct from the wells to lines of the Murchison Pipe Line Co. to supply nearby towns or used direct as fuel in the field. Now only lean gas from the plant will be used as fuel or put into the lines.

NEW UNITED CARBON PLANT

United Carbon Co., Charleston, La., is now operating its new plants in Richland Parish, near Alto, La. This plant has a capacity of 15,000 gallons daily.

This is the largest of the United company's plants. The company is now operating four other plants in Louisiana with a combined capacity of 13,000 gallons. The company last summer dismantled its Cargas plant in Monroe, La., area.

BUYS SUPERIOR OUTPUT

The Warren Petroleum Co. of Tulsa has contracted for the entire natural gasoline output of the Superior Oil Corp. of Tulsa. The latter corporation operates plants in the Mid-Continent area.

The Warren company which specializes in the marketing of natural gasoline will establish a new monthly record in November in the quantity sold. Its sales for the month will total approximately 1,000 cars.

Brief Items for Petroleum Refiners

Jersey Standard And German Trust In New Agreement

The Standard Oil Co. of New Jersey and German dye trust have entered into an agreement covering the use of the trust's coal and oil hydrogenation patents outside of Germany. The agreement provides for safeguarding the dye trust's interests covering the German market for benzine.

The new agreement follows a contract under which the two companies have been co-operating in the development of the process for the past three years. A corporation will be formed, of which the Standard Oil Co. of New Jersey will assume management, to take over the patents relating to the hydrogenation of coal and oil belonging to the I. G. Farbenindustrie and the Standard Oil Co. for the world outside of Germany. This corporation will be owned jointly by the two interested companies.

The terms further provide the establishment of a marketing outlet for the production of synthetic gasoline by the I. G. Farbenindustrie in Germany, providing for the safeguarding of the German company's interests in that country. It is further agreed that the close co-operation under which the two companies have been working toward the development of this process shall be "enlarged and perpetuated."

The Standard Oil Co. of New Jersey and subsidiary companies at present are engaged in the construction of commercial units of the hydrogenation at three refineries in the United States.

LOCKE TO SOUTH AMERICA

George D. Locke, vice president of the Barnsdall Refineries, Inc., accompanied by Mrs. Locke, will set sail from New York on the Pan America, December 28 for Buenos Aires as the destination. Barnsdall products have been distributed since 1922 by the Max W. Boley organization in that territory which includes Argentine and Uruguay.

Mr. and Mrs. Locke will return to the United States March 10. The trip homeward will be over the Andes Mountains to Valparaiso where they embark on the Santa Maria February 12, stopping en route at several cities along the west coast of South America and passing through the Panama canal.

ENLARGES CRACKING FACILITIES

The Gulf Refining Co. is to make large additions to its cracking facilities at Port Arthur, Tex., early in 1930. The company has ordered 32 large high pressure cracking stills from the A. O. Smith Corp. of Milwaukee, Wis. These stills represent an investment of approximately $1,000,000.

The Gulf company has also ordered two large vacuum pipe still units for installation at its Port Arthur refinery. The company recently completed the installation of a 5,000-bbl. refinery at Sweetwater, Tex. The company is reported to have a general improvement program planned for all of its refineries.

WILL REBUILD PLANT

JACKSON, Mich., Nov. 25.—Directors of the American Oil & Grease Co. have unanimously decided to rebuild at once the plant here which was destroyed by fire a few weeks ago. The plant will occupy the same site as that of the destroyed plant and will have a larger capacity.

HOLD FIRST MEETING ON CHICAGO FAIR EXHIBITS

The first meeting of the Committee on Mining Geology, Mining and Metallurgy of the Science Advisory Committee of the National Research Council which is co-operating with the Chicago World's Fair management was held at the Engineer's Club, Chicago November 22 and 23.

The meeting was for the purpose of starting work on the exhibits which are to be a part of the Chicago Century of Progress to be held at Chicago in 1933. The committee consists of representatives of all the various branches of mining and metallurgy. Dr. Gustav Egloff of the Universal Oil Products Co., Chicago and W. E. Wrather of Dallas have been appointed on Petroleum Technology Division.

The committee proposes to demonstrate the progress made by each division through exhibits at Chicago World Fair Exposition. Adequate space will be provided for these exhibits. In its preliminary announcement the general committee stated "that it be recognized at the outset that the exhibit must be unusually effective and fairly comprehensive for selected lines and that dramatization be stressed wherever possible. To this end it is important that the members of the subcommittees consult as widely as possible with fellow scientists with a view of enriching the character of our exhibits."

SHELL SELLS CONTRACTS

MUSKEGON, Mich., Nov. 23.—Contracts of the Shell Petroleum Corp. with producers in the Muskegon oil field have been taken over by the Simrall Pipe Line Corp. and the Shell is no longer represented in the field except by its Michigan land and geological offices.

The Shell contracts originally made with producers about eight months ago on the basis of $1.25 a barrel for Dundee crude for a period of 18 months have been supplanted by new Simrall contracts at the prevailing Mid-Continent gravity scale of $1.45 to $1.65 a barrel for crude varying from 36 to 40 degrees gravity.

The Simrall corporation also has contracted to sell 45,000 bbls. of Dundee crude to one of the three refineries now operating in the Muskegon Field and has discontinued boat and rail shipments of crude oil at least for the present, according to Mr. Simrall.

SHELL BID LOWEST

CHICAGO, Nov. 23.—The quotations for supplying the city of Detroit with 1,000,000 gallons of U. S. Motor gasoline which were made last week developed a wide range of prices. The prices all included delivery at Detroit. The high bid was that of the Standard Oil Co. of Indiana which bid 11.2 cents, the next bidder in price being the Paragon Refining Co., whose bid was 9.98 cents. The lowest price was that of 9¼ cents which was made by the Shell Petroleum Corp., the next lowest being that of the Fisher Industries, a local brokerage concern, the price named being 9⅜ cents with a discount of 1 per cent. The Shell bid was net.

GOES TO TRANSCONTINENTAL

George E. Williams, who resigned as manager of tank car sales with the Johnson Oil Refining Co. of Chicago on November 1, has been named as manager for the Chicago office of the Transcontinental Oil Co. He assumes his new duties on December 1, and in the meantime is visiting the headquarters at Tulsa.

NEW JERSEY STANDARD TO ACQUIRE ANGLO-AMERICAN

NEW YORK, Nov. 25.—The Standard Oil Co. of New Jersey through a subsidiary the Standard Oil Export Corp., will acquire the Anglo-American Oil Co., Ltd. one of principal marketing companies in Great Britain and a subsidiary of The Standard of New Jersey before the dissolution. The acquisition will be effected through an exchange of stock on the basis of one share of Standard Oil Export Corp., 5 per cent non voting preferred of $100 par value for each five and five-ninths shares of Anglo-American one pound sterling par value.

In its offer to the directors of Anglo-American, D. L. Harper, president of Standard Oil Export Corp. says: "The basis of one Standard Oil Export Corp. preferred share for every five and five-ninths Anglo-American Oil Co. shares is equivalent to $18 par value of 5 per cent preferred shares for each one pound sterling share of Anglo-American Oil Co. limited. No fractional shares of the Export corporation will be issued in connection with this exchange. Any Anglo-American Oil Co. shares offered in exchange which are not divisible by five and five-ninths and consequently resulting in a fractional share of the Export corporation will be paid for in cash (American dollars) at the rate of $18 per share. This offer is subject to ac-

(Continued on Page 147)

TO BUILD CRACKING UNIT

NEW YORK, Nov. 23—The Arends Petroleum Co., a Royal-Dutch subsidiary is reported planning the installation of a cracking plant at its refinery at Aruba, D.W.I. The plant, a small one, started operations in May, 1928, with daily capacity of 2,500 tons. The addition of the large cracking plant, now being planned, is the first enlargement.

The company operates three lake tankers which run between the plant and Maracaibo, and have capacity in the aggregate of 8,000 tons. The company does considerable bunkering business, at an average price of $1 per barrel. The price range on bunkering oil is from 83 cents to $1.45 per barrel, depending upon the amount of gas oil required in the fuel.

NEW GULF BUILDING

The Gulf Oil Corp. has announced plans for the construction of a 34 story building to house the general offices of the corporation at Pittsburgh, Pa. The new building will cost approximately $10,000,000.

COSDEN BUYS STATIONS

The Cosden Oil Co. of Fort Worth, Tex., has purchased a string of Detroit, Mich., stations from the Regal Petroleum Co.

ADDING LUB OIL DEPARTMENT

CHICAGO, Nov. 23.—The White Star Refining Co. is adding a lubricating department to its new refinery at Detroit. The new refinery, which has a capacity of 6,000 bbls. daily, was completed last summer.

R. J. DE LONG RESIGNS

CHICAGO, Nov. 23.—R. J. DeLong, sales manager for the Viscosity Oil Co. of this city, compounders of lubricating oils, has resigned. Mr. DeLong was formerly with the Pierce Petroleum Corp. at St. Louis in the lubricating sales department for several years.

Announce Ruling in Regard Posting of All Market Prices

Changes in and additions to interpretation of several rules of the Code of Practices for Marketing Refined Petroleum Products, recently adopted by the petroleum industry, have been made by the National Committee on Interpretation.

It was explained that alteration of and additions to the original interpretations of the code, which became effective August 31 last, are designed to overcome discrepancies or vagueness in the earlier text.

Chief among the changes is a new interpretation covering Rule 17, which concerns the posting of market prices and the handling of commercial accounts. It provides that each marketer determine and post the prices at which he will sell his products and adhere to them until new prices are posted. Prices to commercial accounts are excepted when they apply to written contracts for charge accounts for the delivery of products into properly licensed commercial vehicles. Vehicles bearing other than commercial licenses are barred from obtaining commercial discount. The new interpretation, which replaces that contained in the code handbook of August 2, pages 18 and 19, follows:

"All refiners, distributors, jobbers, wholesalers and retailers are required to conspicuously post the specified price, but the rule does not in any way require the price posted by any refiner, distributor, jobber, wholesaler, or retailer to be the same price posted by his competitor. The rule contemplates that each one will determine for himself the prices at which he contemplates selling his products, post those prices on his premises at a place

(Continued on Page 147)

REVISES CHARTERING POLICIES

NEW YORK, Nov. 25.—Standard Oil Co. of New Jersey will revise its chartering policy and fix all foreign tonnage through one London firm, Robert L. Hague, vice president and general manager of the Standard Shipping Co., tanker operating subsidiary of the New Jersey company, announced at a luncheon here at the Whitehall Club in honor of Sir Osborn G. Holmden, managing director of H. Clarkson & Co., Ltd., chartering brokers of London, who will handle the business.

The arrangement with the London firm, Mr. Hague stated, will not affect the chartering of American tonnage, which will be handled from New York headquarters as heretofore.

HIGHER FUEL OIL PRICES

CHICAGO, Nov. 23.—The bids made to the Sanitary District for fuel oil to be used at the two sewerage disposal plants now being operated have been announced. The oil to be supplied is an 18-22 heavy fuel oil of the usual grade suitable for boilers. Two bids were made by each bidder according to the delivery point, the difference between the two bids being on account of freight.

Prices are per gallon delivered in tank cars at the plant. Henry H. Cross Co., .0364 and .0367 cents. Sinclair Refining Co., .0393 and .0395 cents. Commerce Petroleum Co., .0422 and .0415 cents. Eclipse Oil & Refining Co., .0428 and .0428. One of the plants is located in the northwestern part of the district and the other in the southwestern part. The bids were for a month's supply at the rate of a car a day to each plant.

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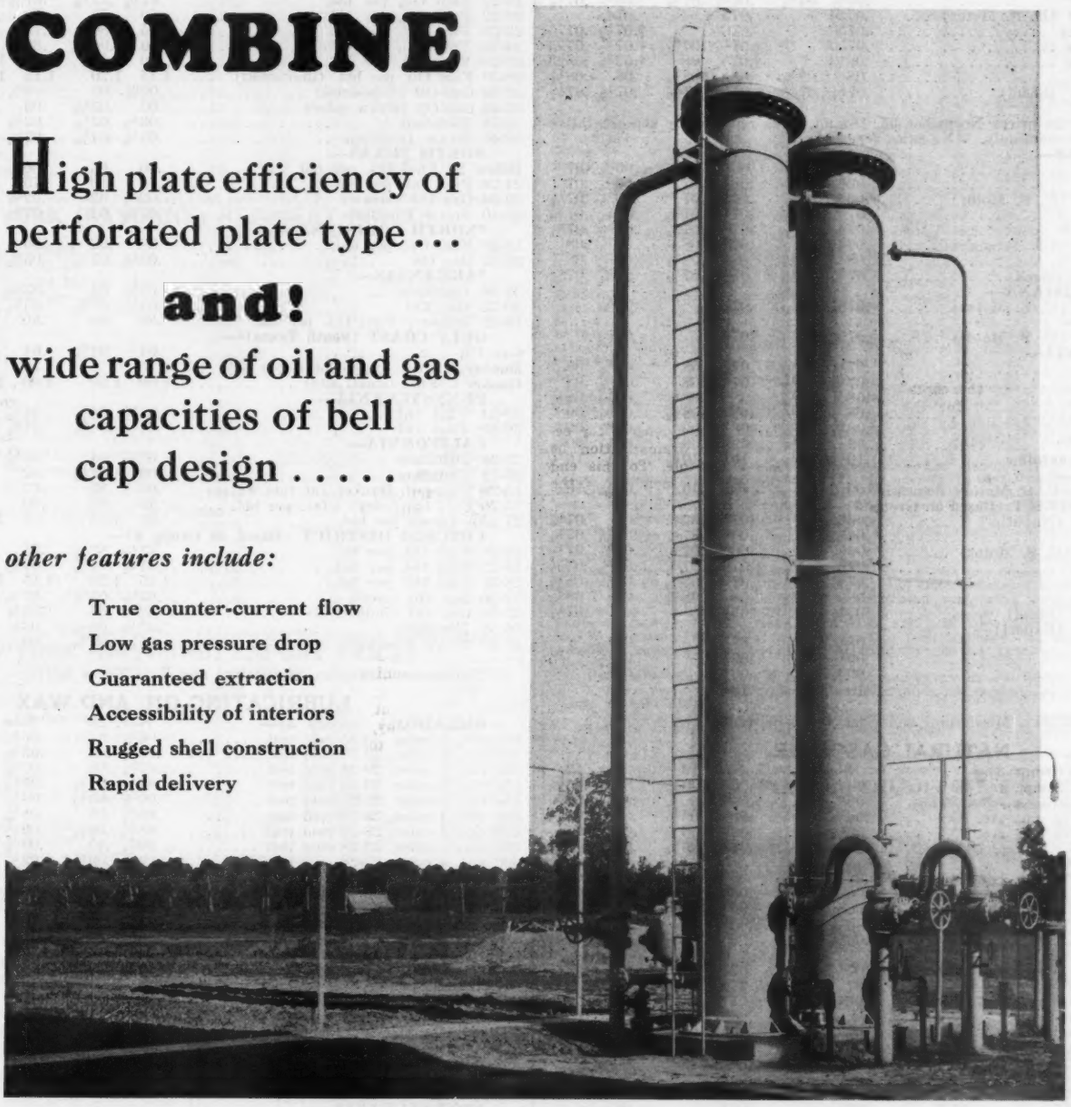

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2015 Magnolia Bldg., Dallas, Texas

502 National Bank of Commerce Bldg., Tulsa, Oklahoma

909 East 59th Street, Los Angeles, Calif.

JACKSON ENGINEERING CORPORATION
TULSA, OKLAHOMA

REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement unless otherwise noted.

GASOLINE AND NAPHTHA

	Nov. 26		Nov. 19		Nov. 12	
OKLAHOMA (Group 3)—						
50-52 450 endpoint	.06¾	.07¼	.07	.07¼	.07	.07¼
56-58 450 endpoint	.06¾	.07¼	.06¾	.07¼	.06¾	.07¼
*58-60 437 endpoint (U. S. Motor)	.0724		.075		.0748	
*60-62 437 endpoint	.0750		.0763		†.07½	.0775
*60-62 400 endpoint	.0750		†.07½	.07¾	†.07½	.0775
*64-66 375 endpoint	.0813		†.07¾	.08	†.07⅞	.0825
68-70 360 endpoint	.08	.08¼	.08	.08¼	.08	.08¼
64-66 437 endpoint (blend)	.07¼	.07½	.07¼	.07½	.07¼	.07½
NORTH TEXAS—						
56-58 450 endpoint	.06¾	.07	.06¾	.07	.06¾	.07
58-60 460 endpoint	.06¾	.07	.06¾	.07	.06¾	.07
58-60 437 endpoint (U. S. Motor)	.06¾	.07	.06⅞	.07	.06⅞	.07¼
60-62 400 endpoint	.07¼	.07⅜	.07¼	.07⅜	.07¼	.07⅜
64-66 390 endpoint	.07⅝	.07¾	.07¼	.07¾	.07½	.07¾
64-66 375 endpoint	.07⅞	.08	.07⅞	.08	.07⅞	.08
68-70 360 endpoint	.08	.08¼	.08	.08¼	.08	.08¼
64-66 437 endpoint (blend)	.07⅜	.07½	.07¼	.07½	.07¼	.07½
***NORTH LOUISIANA—**						
58-60 437 endpoint (U. S. Motor)	.07⅝		.07⅝		.07⅝	
***ARKANSAS—**						
58-60 437 endpoint (U. S. Motor)	.07⅝		.07⅝		.07⅝	
PENNSYLVANIA—						
52-54 Naphtha	.07¼	.07½	.07¾	.08	.07¾	.08
54-56 Naphtha	.07¼	.07½	.07¾	.08	.07¾	.08
58-60 Gasoline	.08	.08¼	.08	.08¼	.08¼	.08½
60 Gasoline	.08	.08½	.08	.08½	.08¾	.09
62 Gasoline	.08½	.08¾	.08¾	.09	.08¾	.09
64 Gasoline	.09	.09¼	.09¼	.09½	.09¼	.09½
68-70 350 endpoint gasoline	.10¼	.10½	.10¼	.10½	.10¼	.10½
CALIFORNIA—						
58-60 437 endpoint (U. S. Motor) domestic	.09	.10	.09	.10	.09	.10
CHICAGO DISTRICT (Based on Group 3)—						
50-52 450 endpoint (Naphtha)	.06¾	.07	.07	.07¼	.07	.07¼
56-58 450 endpoint	.06¾	.07	.06¾	.07¼	.06⅞	.07¼
58-60 437 endpoint (U. S. Motor)	.06⅝	.07¼	.06¾	.07½	.06¾	.07½
60-62 400 endpoint	.07⅜	.07⅝	.07⅜	.07⅝	.07⅜	.07¾
64-66 375 endpoint	.07⅝	.08⅛	.07⅞	.08⅛	.07⅞	.08⅛
68-70 360 endpoint	.08	.08¼	.08	.08¼	.08	.08¼
64-66 437 endpoint (blend)	.07¼		.07¼		.07	.07¼
GULF COAST (Export)—						
58-60 (U. S. Motor)	.08½		.08½		.08½	
60-62 400 endpoint	.09½		.09½		.09½	
61-63 390 endpoint	.09¾		.09¾		.09¾	
64-66 375 endpoint	.10		.10		.10	

*Louisiana, Arkansas, Mississippi and East Texas delivery.

NATURAL GASOLINE

	Nov. 26		Nov. 19		Nov. 12	
OKLAHOMA (Group 3)—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.06¾	.06⅞	.06¾	.06⅞	.06½	.06⅝
Grade AA, 80-87.9, 375 e.p., rec. 90%	.06¾		.06¾		.06½	.06⅝
Grade B, 76-83.9, 375 e.p., rec. 85%	.06¼		.06¼	.06⅜	.06⅜	.06½
Grade BB, 84-92, 375 e.p., rec. 85%	.06¼		.06¼	.06⅜	.06⅜	.06½
Grade C, 80-90, 375 e.p., rec. 78%	.06⅛		.06⅛	.06¼	.06¼	.06⅜
NORTH TEXAS—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.06¾	.06⅞	.06¾	.06⅞	.06½	.06⅝
Grade AA, 80-87.9, 375 e.p., rec. 90%	.06¾		.06¾		.06½	.06⅝
Grade B, 76-83.9, 375 e.p., rec. 85%	.06¼		.06¼	.06⅜	.06⅜	.06½
Grade BB, 84-92, 375 e.p., rec. 85%	.06¼		.06¼		.06⅜	.06½
Grade C, 80-90, 375 e.p., rec. 78%	.06⅛		.06⅛	.06¼	.06¼	.06⅜
NORTH LOUISIANA—						
Grade AA, 80-87, 375 e.p., rec. 90%	.07¼		.07¼		.07	.07¼
Grade BB, 84-92, 375 e.p., rec. 85%	.07		.07		.07	
Grade C, 80-90, 375 e.p., rec. 78%	.06¾		.07		.07	
CALIFORNIA—						
75-78 375-390 endpoint	.07¾	.08¼	.07¾	.08¼	.07¾	.08¼
CHICAGO DISTRICT (Based on Group 3)—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.06¾	.06⅞	.06¾		.06⅝	
Grade AA, 80-87.9, 375 e.p., rec. 90%	.06¾		.06¾		.06⅝	
Grade B, 76-83.9, 375 e.p., rec. 85%	.06¼		.06¼		.06½	
Grade BB, 84-92, 375 e.p., rec. 85%	.06¼		.06¼		.06½	
Grade C, 80-90, 375 e.p., rec. 78%	.06⅛	.06¼	.06¼		.06½	

BURNING OIL

	Nov. 26		Nov. 19		Nov. 12	
OKLAHOMA (Group 3)—						
41-43 water white kerosene	.04¾	.04¾	.04½	.05	.04⅝	.05
42-44 water white kerosene	.04¾	.05¼	.05	.05¼	.05	.05¼
NORTH TEXAS—						
41-43 water white kerosene	.04¼	.04⅜	.04¼	.04½	.04½	.04⅝
40-42 water white kerosene	.04	.04¼	.04	.04½	.04⅛	.04⅜
***NORTH LOUISIANA—**						
41-43 water white kerosene	.05½		.05½		.05½	
***ARKKANSAS—**						
41-43 water white kerosene	.05½		.05½		.05½	
PENNSYLVANIA—						
43 Kerosene prime white	.06¾	.07	.06¾	.07	.06¾	.07
45 Kerosene water white	.06¾	.07	.06¾	.07	.07	.07¼
46 Kerosene water white	.06¾	.07	.06¾	.07	.07	.07¼
47 Kerosene water white	.07	.07¼	.07	.07¼	.07¼	.07½
300 Mineral Seal	.07	.07¼	.07	.07¼	.07	.07¼
CALIFORNIA—						
38-40 water white Kero. (high burning test)	.05	.05½	.05	.05½	.05	.05½
Engine distillate, 43-44, 445 endpoint	.07	.07½	.07	.07½	.07	.07½
Engine distillate, 42-44 480 endpoint	.06¾	.07¼	.06¼	.07¼	.06¾	.07¼
CHICAGO DISTRICT (Based on Group 3)—						
41-43 water white kerosene	.04¼	.04½	.04½	.05	.04½	.05
42-44 water white kerosene	.04¾	.05	.05	.05¼	.05	.05½
GULF COAST (Export)—						
41-43 prime white	.07		.07		.07	
41-43 water white	.08		.08		.08	

*Louisiana, Arkansas, Mississippi and East Texas delivery.

FUEL OIL

	Nov. 26		Nov. 19		Nov. 12	
OKLAHOMA (Group 3)—						
Below 18 Fuel Oil, per bbl.	.65	.67½	.65	.67½	.65	.67½
18-22 Fuel Oil, per bbl.	.67½	.72½	.67½	.72½	.67½	.72½
20-22 Fuel Oil, per bbl.	.70	.75	.70	.75	.70	.75
22-26 Fuel Oil, per bbl.	.75	.80	.75	.80	.75	.80
24-26 Fuel Oil, per bbl.	.80	.90	.80	.90	.80	.90
26-30 Fuel Oil, per bbl.	.90	1.00	.90	1.00	.90	1.00
28-30 Fuel Oil, per bbl. (industrial)	1.15	1.20	1.15	1.20	1.10	1.20
32-36 Gas Oil (industrial)	.02¾	.03	.02¾	.03	.02¾	.03
32-36 Gas Oil (straw color)	.03	.03½	.03	.03⅛	.03⅛	.03¼
36-38 Distillate	.03⅝	.03⅞	.03⅝	.03⅞	.03⅝	.03⅞
38-40 Straw Distillate	.03¾	.04¼	.03¾	.04¼	.03¾	.04¼
NORTH TEXAS—						
Below 20 Fuel Oil, per bbl.	.60	.65	.60	.65	.60	.65
24-26 Fuel Oil, per bbl.	.75	.80	.75	.80	.75	.80
32-36 Gas Oil (straw)	.02¾	.03	.02¾	.03	.02¾	.03
38-40 Straw Distillate	.03¾	.04	.03¾	.04	.03¾	.04⅛
***NORTH LOUISIANA—**						
18-20 Fuel Oil, per bbl.	.80	.90	.80	.90	.80	.90
30-32 Gas Oil	.03½	.03¾	.03½	.03¾	.03½	.03¾
***ARKANSAS—**						
33-36 Distillate	.03⅝	.04	.03⅝	.04	.03⅝	.04
30-32 Gas Oil	.03¼	.03¾	.03¼	.03¾	.03¼	.03¾
16-22 Refinery Fuel Oil, per bbl.	.80	.90	.80	.90	.80	.90
GULF COAST (South Texas)—						
Gas Oil	.04	.04¼	.04	.04¼	.04	.04¼
Bunker C Fuel (cargo lots), per bbl.	.75		.75		.75	
Bunker C Fuel (small lots)	1.00	1.05	1.00	1.05	1.00	1.05
PENNSYLVANIA—						
30-34 Fuel Oil	.04½	.04¾	.04½	.04¾	.04½	.04¾
36-40 Fuel Oil	.04⅝	.04⅞	.04¾	.05	.04¾	.05
CALIFORNIA—						
33-36 Distillate	.03½	.04	.03½	.04	.03½	.04
26-32 Distillate	.02	.02½	.02	.02½	.02	.02½
15-20 Fuel Oil, Bunker (at tide water)	.65	.85	.65	.85	.65	.85
15-20 Fuel Oil (cargo lots), per bbl.	.70	.85	.70	.85	.70	.85
27 plus Diesel, per bbl.	.90	1.05	.90	1.05	.90	1.05
CHICAGO DISTRICT (Based on Group 3)—						
22-26 Fuel Oil, per bbl.	.77½	.82½	.75	.80	.77½	.85
18-22 Fuel Oil, per bbl.	.67½	.72½	.67½	.72½	.70	.75
28-30 Fuel Oil, per bbl.	1.15	1.20	1.15	1.20	1.15	1.20
32-36 Gas Oil (zero)	.03⅛	.03¼	.03⅛	.03¼	.03⅛	.03¼
32-36 Gas Oil (industrial)	.02⅞	.03	.02¾	.03	.02⅞	.03⅛
36-38 Distillate	.03½	.03⅝	.03½	.03¾	.03½	.03¾
38-40 Straw Distillate	.03⅝	.03⅞	.03¾	.04	.03¾	.04

*Louisiana, Arkansas, Mississippi and East Texas delivery.

LUBRICATING OIL AND WAX

	Nov. 26		Nov. 19		Nov. 12	
OKLAHOMA (Group 3)—						
100 vis., 2 color, 20-25 cold test	.06¾	.07	.06¾	.07	.06¾	.07
100 vis., 3 color, 20-25 cold test	.05¾	.06	.05¾	.06	.05¾	.06
150 vis., 3 color, 20-25 cold test	.07¾	.08	.07¾	.08	.07¾	.08
150 vis., 4 color, 20-25 cold test	.07½	.07¾	.07½	.07¾	.07½	.07¾
180 vis., 3 color, 23-28 cold test	.09¼	.09½	.09¼	.09½	.09¼	.09½
180 vis., 4 color, 23-28 cold test	.08¾	.09	.08¾	.09	.08¾	.09
180 vis., 5 color, 23-28 cold test	.08½	.08¾	.08½	.08¾	.08½	.08¾
200 vis., 3 color, 23-28 cold test	.09¾	.10	.09¾	.10	.09¾	.10
200 vis., 4 color, 23-28 cold test	.09¼	.09½	.09¼	.09½	.09¼	.09½
200 vis., 5 color, 23-28 cold test	.08¾	.09	.08¾	.09	.08¾	.09
240 vis., 3 color, 25-30 cold test	.13¼	.13½	.13¼	.13½	.13¼	.13½
240 vis., 4 color, 25-30 cold test	.12¼	.12½	.12¼	.12½	.12¼	.12½
240 vis., 5 color, 25-30 cold test	.11¾	.12	.11¾	.12	.11¾	.12
280 vis., 3 color, 25-30 cold test	.15¾	.16	.15¾	.16	.15¾	.16
280 vis., 4 color, 25-30 cold test	.14¾	.15	.14¾	.15	.14¾	.15
280 vis., 5 color, 25-30 cold test	.13¾	.14	.13¾	.14	.13¾	.14
Cylinder Stocks:						
600, steam refined, light green	.10	.12	.10	.12	.10	.12
600, steam refined, dark green	.09	.11	.09	.11	.09	.11
190-200 vis., D color Bright Stock	.41	.42	.41	.42	.41	.42
150-160 vis., D color Bright Stock	.37		.37		.37	
150-160 vis., E color Bright Stock	.32	.35	.32	.35	.32	.35
Waxes:						
124-126 White Crude Scale Wax	.03	.03⅛	.03	.03⅛	.03	.03⅛
PENNSYLVANIA—						
34 Neutral	.07½	.07¾	.07½	.07¾	.07½	.07¾
34 Sundebloom	.07½	.07¾	.07½	.07¾	.07½	.07¾
36 Miners' Neutral	.07¼	.07½	.07¼	.07½	.07¼	.07½
150, 3 color	.15½	.16	.15½	.16	.15½	.16
180, 3 color	.21½	.22	.21½	.22	.21½	.22
200, 3 color	.24½	.25	.24½	.25	.24½	.25
220, 3 color	.28½	.29	.28½	.29	.28½	.29
600, steam refined	.26½	.27	.26½	.27	.26½	.27
635, steam refined	.29½	.30	.29½	.30	.29½	.30
650, steam refined	.31	.32	.30½	.31	.30½	.31
600, Pennsylvania Flash	.32	.33	.31½	.32	.31½	.32
630, Pennsylvania Flash	.36	.36½	.36	.36½	.36	.36½
600, E filtered	.32½	.33	.33	.33½	.33	.33½
600, D filtered	.36½	.37	.36½	.37	.36½	.37
Pennsylvania Bright Stock	.48	.49	.49	.50	.49	.50
*122-124 White Crude Scale Wax	.03¼	.03½	.03¼	.03½	.03¼	.03½
*124-126 White Crude Scale Wax	.03¼	.03½	.03¼	.03½	.03¼	.03½
*At New York.						
GULF COAST (South Texas)—						
No. 2 color, 100 vis., pale oil	.06	.06½	.05¾	.06½	.05¾	.06½
No. 3 color, 200 vis., pale oil	.08½	.09	.09		.09	
No. 3 color, 300 vis., pale oil	.09¾	.10	.09¾	.10	.09¾	.10
No. 3½ color, 500 vis., pale oil	.11	.11½	.11	.11½	.11	.11½
No. 4 color, 750 vis., pale oil	.12	.13	.12	.13	.12	.13
No. 5 to 6 color, 200 vis., red oil	.07	.08	.07½	.08	.07½	.08
No. 5 to 6 color, 300 vis., red oil	.08½	.09	.08½		.08½	
No. 5 to 6 color, 500 vis., red oil	.09	.10	.09	.10	.09	.10
No. 5 to 6 color, 750 vis., red oil	.11½	.12½	.11¼	.11½	.11¼	.11½
No. 2½ color, 200 vis., pale filtered	.11	.12	.11	.12	.11	.12
No. 2½ color, 300 vis., pale filtered	.12	.13	.12	.13	.12	.13

REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement unless otherwise noted.

No. 2½ color, 500 vis., pale filtered	.14½	.15	.14½	.15	.14½	.15
No. 2½-3 color, 750 vis., pale filtered	.17	.19	.17	.19	.17	.19
CALIFORNIA—						
130 vis., 2½-3 color	.10¼	.10½	.10¼	.10½	.10¼	.10½
200 vis., 2½-3 color	.11½	.11¾	.11½	.11¾	.11½	.11⅞
300 vis., 3-3½ color	.13	.13½	.13	.13½	.13	.13½
350 vis., 3½-4 color	.13½	.13¾	.13½	.13¾	.13½	.13¾
400 vis., 3½-4 color	.15	.15½	.15	.15½	.15	.15½
Red Neutral:						
200 vis., 4½-5 color	.11	.11¼	.11	.11¼	.11	.11¼
300 vis., 5-6 color	.12	.12¼	.12	.12¼	.12	.12¼
400 vis., 5-6 color	.13¼	.14	.13¼	.14	.13¼	.14
500 vis., 4½-5 color	.14¼	.15½	.14¼	.15½	.14¼	.15½
500 vis., 5-6½ color	.15	.15¼	.15	.15¼	.15	.15¼
600 vis., 6½ plus color	.16	.16¼	.16	.16¼	.16	.16¼

Note—Bright stocks are not manufactured commercially on the Pacific Coast.

NEW YORK (BAYONNE) REFINERY PRICES

	Nov. 26		Nov. 19		Nov. 12	
Gasoline, U. S. Motor, 58-60, 437	.08¾	.09	.08¾	.09	.08¾	.09
Kerosene, water white, 41-43	.07¾		.07¾		.07¾	
*Fuel Oil, Bunker "C," 14-16, per bbl.	1.05		1.05		1.05	
†Fuel Oil, Diesel, 28-30, per bbl.	2.00		2.00		2.00	
Gas Oil, 32-36 gravity	.05¼		.05¼		.05¼	
25 pale Paraffin Oil	.10½		.10½		.10½	
28 pale Paraffin Oil	.07¼		.07¼		.07¼	
285 red Paraffin Oil	.12½		.12½		.12½	
250 red Paraffin Oil	.11½		.11½		.11½	
225 red Paraffin Oil	.10		.10		.10	
200 red Paraffin Oil	.09¼		.09¼		.09¼	
Refined Wax.						
120-122 a.m.p., per lb.	.04		.04		.04	
125-127 a.m.p., per lb.	.04⅛		.04⅛		.04⅛	
130-132 a.m.p., per lb.	.04⅞		.04⅞		.04⅞	
133-135 a.m.p., per lb.	.05⅞		.05⅞		.05⅞	
135-137 a.m.p., per lb.	.06¼		.06¼		.06¼	
Petrolatum in barrels, carload lots, per pound:						
Dark Green	.01⅞		.01⅞		.01⅞	
Amber	.03½		.03½		.03½	
Extra Amber	.03⅝		.03⅝		.03⅝	
Cream	.06⅜		.06⅜		.06⅜	
Lily White	.07⅜		.07⅜		.07⅜	
Snow White	.08⅜		.08⅜		.08⅜	

*Lighterage 5.0 cents a barrel extra. †Lighterage 6.5 cents a barrel extra.

NEW YORK (BAYONNE) EXPORT PRICES

	Nov. 26		Nov. 19		Nov. 12	
Kerosene, prime white	.07¾		.07¾		.07¾	
Kerosene, water white	.09		.09		.09	
600, steam refined cylinder stocks, in bbls.	.33		.33		.33	
635, steam refined	.35		.35		.35	
650, steam refined	.39		.39		.39	
600, Pennsylvania Flash	.43		.43		.43	
630, Pennsylvania Flash	.47		.47		.47	
600, Warren E	.40		.40½		.40½	
600, Oil City, E	.39		.39½		.39½	
Light 140-150 Bright Stocks	.57	.58	.59	.60	.59	.60
Dark 140-150 Bright Stocks	.56	.57	.57	.58	.57	.58

LOS ANGELES EXPORT PRICES

	Nov. 26		Nov. 19		Nov. 12	
Kerosene, water white	.04½	.05	.04½	.05	.04½	.05
U. S. Motor Gasoline, 53-55, 437 e.p.	.06¼	.06¾	.06¼	.06¾	.06¼	.06¾

CRUDE OIL PRICES

OKLAHOMA, KANSAS, NORTH AND EAST CENTRAL TEXAS

Corsicana heavy (January 11)* ..... $ .80
Other fields ..... See gravity table

*Posted by Magnolia Petroleum Co.

TEXAS PANHANDLE

Gray County, Wheeler County and Carson-Hutchinson Counties—See gravity table.

WEST TEXAS

Iatan* ..... Same as North Texas
Crane-Upton-Crockett, Pecos, Winkler, Mitchell and Glasscock—See gravity table
Chalk† ..... $ .65

*Includes Westbrook Field.
†Posted by Humble Oil & Refinery Co.

ARKANSAS-NORTH LOUISIANA

Smackover, below 24 gravity (May 20, 1929) ..... $ .85
Smackover, 24 gravity and above (May 20, 1929) 1.00
Cotton Valley, below 36 gravity (May 22) ..... .85
Bellevue (May 29, 1929) 1.30
Urania (May 21, 1929) 1.01
East El Dorado (May 22, 1929) ..... .85
Other fields ..... See gravity table

Cotton Valley crude about 36 gravity takes same gravity price schedule as shown for North Louisiana and Arkansas crude in Mid-Continent gravity price table.

Note—Smackover, Cotton Valley and Bellevue posted by Standard Oil Co. of Louisiana and Magnolia Petroleum Co.; Urania posted by Louisiana Oil Refining Corp.; East El Dorado, Magnolia Petroleum Co.

GULF COAST

Grade A (May 20)* $1.30
Grade B ..... See gravity table
Jennings, La. (March 14)† 1.05
Saratoga, Batson, Dayton (March 14, 1927)† 1.20
Refugio¶ ..... .70
Markham (March 14)§ 1.00
High Island (December 14)¶ 1.00

*Humble Oil & Refining Co., The Texas Company, Gulf Pipe Line Co., and Sun Pipe Line Co. †Gulf Pipe Line Co. ‡Sun Pipe Line Co. §The Texas Company. ¶Posted by Gulf Pipe Line Co.

ROCKY MOUNTAIN STATES
Ohio Oil Co.-Midwest Refining Co.
(Effective May 21, 1929)

Rock Creek, Wyo. $1.40
Salt Creek ..... See gravity table
Big Muddy $1.43
Grass Creek, heavy (July 27, 1928) ..... .90
Grass Creek, light 1.65
Mule Creek 1.20
Elk Basin 1.65
Lance Creek 1.68
Poison Spider (March 14, 1927) 1.00
Notches (March 14, 1927) ..... .65
Rex Lake (February 22) 1.10
Osage 1.65
Lost Soldier (contract, May 22) 1.05
Hamilton Dome (March 14, 1927) ..... .85
Pedro 1.26
Greybull 1.65
Four Bear ..... .85
Cat Creek (Montana) (July 27, 1928) .. 1.48
Sunburst (Montana) (May 23, 1929) ... 1.75
Torchlight 1.65
Hogback (New Mexico) 1.70

Note—Salt Creek, Osage, Cat Creek, Greybull and Hogback posted by Midwest Refining Co., and the remainder by the Ohio Oil Co. Both companies post Grass Creek light and Elk Basin.

SOUTH CENTRAL AND SOUTH-WESTERN TEXAS

Luling (May 2)* ..... $ .90
Mirando (May 20, 1929)† ..... .90
Salt Flat (May 20, 1929)§ 1.25
Rockdale Minerva (April 15)
Below 28 gravity 1.25
38-38.9 gravity 1.27

(Continued on Page 142)

CRUDE OIL GRAVITY TABLE

Gravity	1 Okla., Kans. N. C. Texas	2 No. La. and Arkansas	3 Crane, Upton, Crockett, Winkler, Pecos, Texas crudes, and Lea, N. Mex.	4 Stephens, Ark.	5 Wheeler (Texas Panhandle)	6 Gray County (Texas Panhandle)	7 Carson and Hutchinson (Texas Panhandle)	8 Salt Creek, Wyo.	9 Trade B and Light Crude (G. Coast)	10 Somerset (South Central Texas)
24 and above	....	....	....	....	....	....	....	....	....	....
Below 24	....	....	....	....	....	....	....	....	....	....
Below 25	.85	....	.70	....	....	....	....	....	1.15	....
25 to 25.9	.90	....	.74	....	....	....	....	....	1.18	....
26 to 26.9	.95	....	.78	....	....	....	....	....	1.21	....
27 to 27.9	1.00	....	.82	....	....	....	....	....	1.24	....
Below 28	....	1.00	....	.90	.90	.90	.90	....	....	....
28 to 28.9	1.05	1.05	.86	.94	.90	.90	.90	....	1.27	....
29 to 29.9	1.10	1.10	.90	.98	.90	.95	.90	1.10	1.30	....
30 to 30.9	1.15	1.15	.94	1.02	.95	1.00	.90	1.15	1.33	....
31 to 31.9	1.20	1.20	.98	1.06	1.00	1.05	.90	1.20	1.36	....
32 to 32.9	1.25	1.25	1.02	1.10	1.05	1.10	.95	1.25	1.39	1.05
33 to 33.9	1.30	1.30	1.06	....	1.10	1.15	1.00	1.30	1.42	1.07
34 to 34.9	1.35	1.35	1.10	....	1.15	1.20	1.05	1.35	1.45	1.09
35 to 35.9	1.40	1.40	1.14	....	1.20	1.25	1.10	1.40	1.48	1.11
36 to 36.9	1.45	1.45	1.18	....	1.25	1.30	1.15	1.45	....	1.13
37 to 37.9	1.50	1.50	....	....	1.30	1.35	1.20	1.50	....	1.15
38 to 38.9	1.55	1.55	....	....	1.35	1.40	1.25	....	....	1.17
39 to 39.9	1.60	1.60	....	....	1.40	1.45	1.30	....	....	....
40 to 40.9	1.65	1.65	....	....	1.45	1.50	1.35	....	....	....
41 to 41.9	1.70	1.70	....	....	1.50	1.55	1.40	....	....	....
42 to 42.9	1.75	1.75	....	....	1.55	1.60	1.45	....	....	....
43 to 43.9	1.80	1.80	....	....	1.60	1.65	1.50	....	....	....
44 and above	1.85	1.85	....	....	1.65	1.70	1.55	....	....	....

Column 1, Note—Magnolia Petroleum Co. posted schedule May 20, 1929, making price below 26 gravity 70 cents per barrel, 26-26.9 gravity 75 cents, 27-27.9 gravity 85 cents, 28-28.9 gravity 90 cents, 29-29.9 gravity 95 cents, 30-30.9 gravity $1.05, and 31-31.9 gravity $1.1' with balance of the price schedule as shown above. Top price of Empire Pipe Line Co., effective November 14 for Oklahoma City crude oil, is for 40° and above.

Oklahoma—Carter Oil Co., Prairie Oil & Gas Co., Sinclair Oil & Gas Co., Gypsy Oil Co. The Texas Company, May 20.

North Central Texas—Including Ranger, Mexia, Powell, Richland, Wortham, Lytton Springs, Currie, Nocona and Moran, Prairie Oil & Gas Co., Sinclair Oil Refining Co., Humble Oil & Refining Co., The Texas Company and Gulf Refining Co., May 20.

Kansas—Prairie, Sinclair, The Texas Company and Carter, May 20.

Column 2—Arkansas and North Louisiana—(Caddo, Bull Bayou, Crichton, Cotton Valley above 36 gravity, DeSoto, Haynesville, Homer and El Dorado only) May 22, Standard Oil Co. of Louisiana, Louisiana Oil Refining Co., Gulf Refining Co., Magnolia Petroleum Co. schedule applies to Pine Island, Haynesville, Bull Bayou, Louisiana and El Dorado, Ark. light crude.

Column 3—Humble Oil & Refining Co. and Magnolia Petroleum Co., May 20.

Column 4—Atlantic Oil Producing Co., Prairie Oil & Gas Co., Louisiana Oil Refining Corp., May 21, 1929.

Columns 5, 6 and 7—Humble Oil & Refining Co., Magnolia Petroleum Co., May 20, 1929.

Column 8—Midwest Refining Co., May 20, 1929. All crude over 37 gravity $1.50 per barrel.

Column 9—Humble Oil & Refining Co., May 20, 1929 (schedule ends 35 and above).

Column 10—Grayburg Pipe Line Co. and Pioneer Oil & Refining Co., April 7.

CALIFORNIA CRUDE OIL PRICES

Standard Oil Co.-Union Oil Co. (Effective October 21, 1929)

Gravity—	1 Signal Hill (Nov. 8) Athens, Inglewood, Monterey-Dominguez, Watsonville	2 Whittier, La Habra, Coyote Hills	3 Midway-Sunset, Elk Hills, Lost Hills, Reinridge, Buena Vista Hills	4 Montebello	5 Santa Fe Springs (Nov. 8)	6 Santa Maria, Coalinga	7 Wheeler Ridge, Fruitvale	8 Orcutt, Ventura, Rincon	9 Ventura Ave.* Potrero†	10 Elwood Terrace	11 Seal Beach (Nov. 4)
14 to 14.9	.70	.70	.50	.70	....	.50	.50	.65	.40	....	.70
15 to 15.9	.70	.70	.50	.70	....	.50	.50	.65	.40	....	.70
16 to 16.9	.70	.70	.50	.70	....	.50	.50	.65	.40	....	.70
17 to 17.9	.70	.70	.50	.70	....	.50	.50	.65	.40	....	.70
18 to 18.9	.75	.75	.56	.70	....	.56	.56	.70	.40	....	.78
19 to 19.9	.80	.80	.62	.75	....	.62	.62	.70	.40	....	.80
20 to 20.9	.85	.84	.68	.80	....	.68	.68	.70	.40	....	.85
21 to 21.9	.89	.88	.74	.85	.89	.74	.74	.86	.40	....	.89
22 to 22.9	.93	.91	.80	.90	.92	.80	.80	.87	.40	....	.93
23 to 23.9	.97	.94	.85	.95	.95	.85	.85	.90	.40	....	.97
24 to 24.9	1.01	.97	.90	.98	.98	.88	.88	.94	.40	....	1.01
25 to 25.9	1.05	1.00	.95	1.01	1.01	.91	.91	.98	.60	....	1.05
26 to 26.9	1.09	1.04	1.00	1.04	1.04	.94	.94	1.02	.60	....	1.09
27 to 27.9	1.13	1.08	1.05	1.07	1.07	.98	.97	....	.60	....	1.13
28 to 28.9	1.17	1.12	1.10	1.10	1.10	1.02	....	....	.60	....	1.17
29 to 29.9	1.21	1.16	1.16	1.13	1.15	1.06	....	....	.60	....	1.21
30 to 30.9	1.25	1.20	1.22	1.16	1.20	1.10	....	....	.60	....	1.25
31 to 31.9	1.30	....	1.28	....	1.25	1.14	....	....	.60	....	1.30
32 to 32.9	1.35	....	1.34	....	1.30	1.18	....	....	.60	....	1.35
33 to 33.9	1.41	....	1.40	....	1.35	1.22	....	....	.60	....	....
34 to 34.9	1.47	....	1.46	....	1.40	1.26	....	....	.60	1.16	....
35 to 35.9	1.53	....	....	....	1.45	1.30	....	....	.60	1.22	....
36 to 36.9	1.59	....	....	....	1.50	....	....	....	.60	1.28	....
37 to 37.9	1.65	....	....	....	1.55	....	....	....	.60	1.34	....
38 to 38.9	1.71	....	....	....	1.60	....	....	....	.60	1.40	....
39 to 39.9	1.77	....	....	....	1.65	....	....	....	.60	1.46	....
40 to 40.9	1.83	....	....	....	....	....	....	....	.60	1.52	....
41 to 41.9	1.89	....	....	....	....	....	....	....	.60	1.58	....
42 to 42.9	1.95	....	....	....	....	....	....	....	.60	1.64	....

*October 22. †Sunset Pacific Oil Co., October 26.

Kern River, Newhall-McKittrick, Mount Poso and Round Mountain 11 to 13.9 gravity 45 cents, 14 gravity and above 50 cents, effective October 2, 1929. On December 1, 1928, the Union Oil Co. posted Midway-Sunset, Elk Hills, Buena Vista, Lost Hills and Coalinga crude as follows: 11 to 13.9 gravity at 45 cents, 14 gravity and above 50 cents.

Column 1—Signal Hill, Seal Beach, Huntington Beach and Alamitos Heights crude, 14 to 32.9 gravity, inclusive; Richfield, Olinda-Brea and Fullerton, 14 to 30.9 gravity; Torrance and Inglewood, 14 to 28.9 gravity; Dominguez and Athens-Rosecrans, 24 to 42.9 gravity.

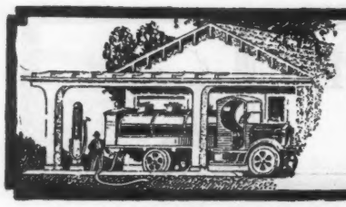
Column 2—Whittier crude, 14 to 22.9 gravity; Coyote Hills, 14 to 30.9 gravity.

Column 3—Kern River, Newhall and McKittrick, 11 to 19.9 gravity; Midway-Sunset Buena Vista and Elk Hills, 11 to 33.9 gravity; Lost Hills, 11 to 34.9 gravity; oil below 14 gravity posted at 45 cents.

Column 6—Oil below 14 gravity posted at 45 cents.

Columns 8 and 9—Posted by Union Oil Co. only.

Kettleman Hills, 55 gravity and above, $1.65 (posted by Standard Oil Co. of California).



TANK WAGON MARKETS

Tank wagon quotations for gasoline and kerosene in United States as furnished by the larger marketing concerns Nov. 26

ALL TANK WAGON AND SERVICE STATION QUOTATIONS INCLUDE TAXES

STANDARD OIL CO (INDIANA)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Chicago†	17.0	18.0	3.0	13.0
Decatur, Ill.	19.2	20.2	3.0	13.1
E. St. Louis	15 4	15.4	3.0	12.2
Joliet	19.4	20.4	3.0	13.2
Peoria	19.2	20.2	3.0	13.1
Quincy	19.2	20.2	3.0	12.9
Davenport, Ia.	19.5	20.5	3.0	13.2
Des Moines	19.5	20.5	3.0	13.2
Keokuk	19.5	20.5	3.0	13.2
Sioux City	19.1	20.1	3.0	12.9
Duluth, Minn.	20.5	21.5	3.0	13.9
Mankato	20.1	21.1	3.0	13.7
Minneapolis	20.2	21.2	3.0	13.9
LaCrosse, Wis.	19.2	20.2	3.0	14.0
Milwaukee	18.1	19.1	3.0	12.9
Madison	18.2	17.2	3.0	13.1
Detroit, Mich.	19.8	20.8	3.0	14.7
Grand Rapids	19.7	20.7	3.0	14.6
Saginaw	19.9	20.9	3.0	14.8
Evansville, Ind.	20.0	21.0	4.0	14.0
Fort Wayne	20.4	21.4	4.0	14.4
Indianapolis	20.2	21.2	4.0	14.2
South Bend	20.4	21.4	4.0	14.4
Fargo, N. D.	21.9	22.9	3.0	15.9
Huron, S. D.	21.2	22.2	4.0	14.7
Sioux Falls	20.1	21.1	4.0	14.4
K. C., Mo.*	18.9	19.9	3.0	11.6
Springfield*	18.8	19.8	3.0	12.5
St. Louis*	17.9	18.9	3.5	12.2
St. Joseph	18.5	19.5	2.0	13.2
Wichita, Kans.	17.8	18.8	3.0	11.8
Bartlesville, Ok.	18.5	19.5	4.0	11.5

*State tax 2 cents; remainder city tax.

†Effective February 20, discounts on Q.D.A. in Chicago district 2 cents off service station price on purchases of 500 gallons or more per month and 4 cents on purchases of 1,000 gallons or more per month.

NAPHTHA

	Tank wagon	Tank car
Oleum spirits	15.7	12.9
V. M. & P. Naphtha	17.2	13.9
Cleaner's naphtha	17.0	14.9
Stanisol	17.0	15.4

Tank wagon prices f.o.b. Chicago; tank car prices f.o.b. Whiting.

STANOLIND FURNACE OIL IN CHICAGO

Less than 100 gallons	9.0
100 to 349 gallons	8.0
350 gallons or more	7.5

Note—Outside Chicago furnace oil discount of 1 cent per gallon is given on deliveries of 100 to 349 gallons and 1½ cents on deliveries of 350 gallons or more.

The following quantity discounts from the service station price are allowed on monthly sales of gasoline: 2,000 gallons or less, 2 cents; more than 2,000 and less than 6,000 gallons, 2½ cents; more than 6,000 gallons, 3 cents. Discounts are allowed each month and they are not cumulative. Delivery tickets showing date and quantity delivered must be sent to the seller before the tenth of the month to secure the discount on the previous month's purchases.

SOUTHWESTERN DISTRICT

Magnolia Petroleum Co.

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Dallas, Tex.	17.0	21.0	4.0	13.0
Fort Worth	17.0	20.0	4.0	12.0
Houston	18.0	17.0	4.0	11.0
San Antonio	15 0	19 0	4.0	11.0
El Paso	15.0	18.0	4.0	16.0
Texarkana	17.0	19.0	4.0	12.0
Muskogee, Ok.*	16.0	19.0	4.0	13.0
Okla. City*	17.0	20.0	4.0	10.0
Tulsa*	15.0	19.0	4.0	10.0
Ft. Smith, Ark.	15.0	17.0	5.0	12.0
Little Rock	19.0	21.0	5.0	13.0

*Gasoline tank wagon price to dealers 2 cents under posted tank wagon.

ROCKY MOUNTAIN DISTRICT

Continental Oil Co.

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Denver, Colo.	18.0	21.0	4.0	15.5
Pueblo	18.0	21.0	4.0	15.5
Grand Junction	22.5	25.5	4.0	19.0
Casper, Wyo.	20 0	23.0	4.0	14 0
Cheyenne	21.0	24 0	4 0	15 5
Butte, Mont.	25.5	28.5	5.0	20.0
Helena	25.5	28.5	5.0	20.0
Salt Lake, Utah	21.0	24.0	3.5	17.0
Albu'que, N. M.	21.0	24.0	5.0	17.0
Boise, Idaho	23.5	26.5	4.0	19.0
Twin Falls	23.5	27.5	4.0	19.0

PENNSYLVANIA—DELAWARE AND PART NEW ENGLAND

The Atlantic Refining Co.

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Pittsburgh, Pa.	15 0	*21.0	...	13 0
Philadelphia	15.0	*21.0	...	13.0
Scranton	15 0	*21 0	...	13.0
Allentown	15.0	*21 0	...	13.0
Altoona	15 0	*21 0	...	13 0
Erie	15 0	*19.0	...	13.0
Dover, Del.	18.0	20 0	3.0	13.0
Wilmington	18 0	20 0	3.0	13.0
Springf'd, Mass.	18.0	20.0	3.0	15.0
Worcester	18.0	20.0	3.0	15.0
Boston	18.0	20.0	3.0	15.0
Providence, R.I.	18.0	20.0	3.0	13.0
Hartford, Conn.	18.0	20.0	3.0	14.0
New Haven	18.0	20.0	3.0	15.0

*Includes tax of 4.0 cents. Pennsylvania tax is collected by the dealer and paid by him direct to the State. The Atlantic Refining Co. recognizes a 2-cent per gallon discount on gasoline from its posted tank wagon markets on sales to dealers for purposes of resale. The Atlantic Refining Co. also recognizes a maximum discount of 2 cents per gallon on gasoline to commercial accounts under contract for one year.

NEW YORK AND PART OF NEW ENGLAND DISTRICT

Standard Oil Co. (New York)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Albany, N. Y.	18.0	20.0	2.0	15.0
New York*	16.0	18.0	2.0	15.0
Buffalo	18.0	20.0	2.0	14.0
Rochester	18.0	20.0	2.0	14.0
Syracuse	18.0	20.0	2.0	15.0
Boston, Mass.	18.0	20.0	2.0	15.0
Augusta, Me.	20.0	22.0	4.0	15.0
Manch't'r, N. H.	20.0	22.0	4.0	15.0
Burlington, Vt.	19.0	20.0	4.0	15.0

*Prices in steel barrels.

SOUTHERN DISTRICT

Standard Oil Co. (Kentucky)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Atlanta, Ga.	20.0	22.0	4.0	16.5
Augusta	20.0	22.0	4.0	15.5
Macon	23.0	25.0	4.0	16.5
Savannah	22.0	24.0	4.0	15.5
Birm'ham, Ala.	19.0	21.0	4.0	13.0
Mobile	18.0	20.0	4.0	15.0
Montgomery	21.0	23.0	4.0	16.5
Clarks'le, Miss.	18.0	20.0	5.0	12.5
Jackson	21.0	23.0	5.0	13.0
Natchez	20.5	20.5	5.0	14.0
Gulfport	22.5	24.5	5.0	14.0
Vicksburg	20.5	22.5	5.0	14.0
Jack'ville, Fla.	22.0	24.0	6.0	14.5
Miami	23.0	25.0	6.0	15.5
Pensacola	18.0	20.0	6.0	14.5
Tampa	22.0	24.0	5.0	14.5
Lexington, Ky.	20.0	22.0	5.0	15.5
Covington	20.0	21.0	5.0	15.5
Louisville	21 0	23.0	5.0	13 0
Ashland	18.0	19.0	5.0	15.5
Catlettsburg	18.0	19.0	5.0	15.5

In addition to the state tax of 4 cents on gasoline, Montgomery has city tax of 1 cent on gasoline and one-half cent on kerosene. Kerosene prices in Georgia include 1-cent tax. In Florida, an inspection fee of 0.125 cent; in Alabama, an inspection fee of one-half cent on kerosene and one-fourth cent on gasoline. Pensacola and Mobile taxes include 1-cent city levy. Gulfport tax includes privilege tax of 2 cents in addition to state tax.

Effective April 2, price to dealers 2 cents under posted tank wagon price.

PACIFIC COAST TERRITORY

Standard Oil Co. (California)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
San Francisco	20.0	24.0	3.0	15.5
Los Angeles	19.5	23.5	3.0	15.5
Reno, Nev.	24.0	26.0	4.0	19.0
Portland, Ore.	20.5	24.5	3.0	16.5
Seattle, Wash.	20.5	23.5	3.0	16.5
Tacoma	20.5	23.5	3.0	16.5
Spokane	24.5	27.5	3.0	20.5
Phoenix, Ariz.	18.0	22.0	4.0	20.5

NEBRASKA

Standard Oil Co. (Nebraska)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Omaha	20.25	22.25	4.0	13.25
McCook	21.75	23.75	4.0	14.75
Norfolk	20.75	22.75	4.0	13.75
N. Platte	21.75	23.75	4.0	14.50
Scottsbluff	21.75	23.75	4.0	14.25

ATLANTIC COAST DISTRICT

Standard Oil Co. (New Jersey)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Atlantic City	16.0	18.0	3.0	13.0
Newark, N. J.	17.0	19.0	3.0	13.0
Annapolis, Md.	20.0	22.0	4.0	13.0
Baltimore	19.0	21.0	4.0	13 0
Cumberland	20.0	22.0	4.0	13.0
Washington	17.0	19.0	3.0	12.0
Danville, Va.	21.0	23.0	5.0	12.0
Norfolk	20.0	22.0	5.0	13.0
Petersburg	21.0	23.0	5.0	13.0
Roanoke	21 0	23.0	5.0	13.0
Richmond	20.0	22.0	5.0	13.0
Charles'n, W.Va.	19.0	21.0	4.0	13.0
Keyser	20.0	22.0	4.0	13.0
Parkersburg	19.0	21.0	4.0	12.0
Wheeling	20.0	22.0	4.0	13.0
Charlotte, N. C.	19.0	21.0	5.0	13.0
Hickory	21.0	23.0	5.0	13.0
Mt. Airy	21.0	23.0	5.0	13.0
Salisbury	19.0	21.0	5.0	13.0
Charleston, S.C.	21.0	23.0	6.0	13.0
Columbia	22.0	24.0	6.0	13.0

A 2-cent per gallon discount off the gasoline tank wagon price is offered to dealers.

OHIO

Standard Oil Co. (Ohio)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Ohio points*	19.0	20.0	4.0	†13.0

*Dealers and commercial accounts 2 cents under tank wagon.

†Service station price 15 cents.

CENTRAL SOUTH DISTRICT

Standard Oil Co. (Louisiana)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
N. Orleans, La.*	15.0	15.0	5.0	13.0
Baton Rouge	20.0	20.0	4.0	14.5
Alexandria	19.0	21.0	5.0	16.0
Lafayette†	20.0	22.0	5.0	14.0
Lake Charles†	20.5	22.5	5.0	16.0
Shreveport	19.5	21.5	4.0	15.0
Knoxv'le, Tenn.	20.0	22.0	5.0	16.0
Memphis	20.0	22.0	5.0	12.5
Chattanooga	20.0	20.0	5.0	14.0
Nashville	19.0	19.9	5.0	16.0
Bristol	21.0	22.0	5.0	14.0
Lt. Rock, Ark.	19.0	21.0	5.0	13.0

*Tax of 5 cents includes city tax of 1 cent. Louisiana Kerosene prices include 1-cent state tax and 1-cent parish tax.

†Includes 1-cent parish tax.

CRUDE PRICE CHANGES

November 26: Humble Oil and Refining Co. changed prices in Howard and Glasscock Counties. A price of 82 cents was established for crude oil of 27 gravity with a 2-cent advance for each degree to 36° and above for which a maximum price of $1 will be paid. Below the 27 gravity the differential is 4 cents for each degree with a minimum price of 70 cents for below 25 gravity.

FORT WORTH A.P.I. TRAIN

FORT WORTH, Tex., Nov. 26.—The Texas and Pacific Railroad has agreed to hold the special train, leaving Fort Worth for Chicago for the A.P.I. Convention, until 5:45 Saturday afternoon, November 30. Baggage can be checked and reservations attended to in advance. Dallas oil men can check their baggage at the Dallas depot and it will be picked up as the train goes through.

OPENS BRADFORD OFFICE

BRADFORD, Pa., Nov. 23.—A. F. Melcher of the Petroleum Engineering Laboratories, Tulsa, announced today the establishment of a branch laboratory in Bradford. The new enterprise will be prepared and equipped to complete sand analysis of cores or drill cuttings, saturation, porosity, texture and feet of pay. The laboratory will furnish reports on valuation of gas and oil leases, well spacing and repressuring in addition to general production and geological problems.

DISTILLATION TEST OF VAN ZANDT COUNTY WELL

The new pool in Van Zandt County of East Central Texas will furnish a crude oil of approximately 35 gravity according to a test made of the crude oil coming from the discovery well of the Pure Oil Co. This well which is known as the No. 1 Jarmon is producing from a 2,700 foot sand. It is believed that the well has opened a large producing area.

The discovery is of particular interest to the producing fraternity because a plan of unit operation is being worked out by owners of leases in what is considered the probable producing area. Under the plan proposed the field will be developed slowly so as not to exceed the available outlets. At present the crude oil is being moved by tank car to the Smith Bluff, Texas refinery of the Pure company.

A laboratory test made of the crude oil from the discovery well when it was first completed showed the following yields:

Gravity, 34.5 A.P.I.; sulphur content, 1.89 per cent; pour test, below zero.

Viscosity, 51 seconds at 100° F. Saybolt Universal.

29.2 per cent gasoline content, gravity 59.4, endpoint 400.

6.6 per cent kerosene, 43.6 gravity.

20.7 per cent gas oil, 34.3 gravity.

16.1 per cent cracked wax distillate, 26.8 gravity, 65. F. pour, viscosity 117 at 100° F.

26.7 per cent flux, 16.5 gravity, 454 viscosity at 210°, pour test 65° F.

CRUDE OIL PRICES

(Continued from Page 141)

39-39.9 gravity	1.29
40 and above	1.31
Thrall‡	.75
Callihan (May 15)	1.75
Lytton Springs (Lockhart)	See gravity table
Somerset	See gravity table

*Posted by Magnolia Petroleum Co.
†Magnolia Petroleum Co., Humble Oil & Refining Co., Crown Central Pipe Line Co.
‡Thrall prices same as North Central Texas less 19¼ cents per cwt. freight.
§Humble Oil & Refining Co.

EASTERN STATES
Joseph Seep Purchasing Agency
(Effective October 1, 1929)

Penna Grade Oil in New York Transit Lines (New York)	$3.05
Bradford District Oil in National Transit Lines (Pennsylvania)	3.05
Penna Grade Oil in National Transit Lines (Pennsylvania)	3.05
Penna Crude Oil in Southwest Pennsylvania Lines (West Virginia)	3.00
Penna Grade Oil in Eureka Pipe Line Lines (Pennsylvania)	2.90
Penna Grade Oil in Buckeye Pipe Line Lines (Ohio)	2.70
Cabell Grade Oil in Eureka Pipe Line Lines (West Virginia) (May 22, 1929)	1.75
Corning 35-cent Grade Oil in Buckeye Pipe Line Co.'s Line (May 22, 1929)	1.80
Corning 25-cent Grade Oil in Buckeye Pipe Line Co.'s lines (May 22, 1929)	1.90
Somerset Oil in Cumberland Pipe Line Lines (Kentucky) (Nov. 12, 1929)	1.55
Ragland Grade Oil in Cumberland Pipe Line Lines (Kentucky) (Jan. 29)	.60

MIDDLE WESTERN STATES
Ohio Oil Co.
(Effective May 21, 1929)

Lima	$1.80
Wooster	1.90
Illinois	1.75
Indiana	1.57
Princeton	1.75
Plymouth	1.28
Waterloo (November 17, 1926)	1.35
Western Kentucky	1.68
Dundee, Mich. (Sept. 17, 1929)§	Same as Mid-Continent gravity scale
Upper and Lower Traverse sands, Mich§	Same as Mid-Continent gravity scale
Midland, Mich. (June 3, 1929)*	$1.70
Saginaw, Mich., Saginaw Sand (February 10)†	1.89
Saginaw, Mich., Berea Sand (February 10)†	1.79
Cumberland, Clay, Barren, Clinton and Monroe Counties, Kentucky (March 15)‡	1.50
Oil in line in Stoll Oil Refining Co. in Oil City, Ky. (Oct. 7, 1929)§	1.70
Oil Springs (Canada)¶	2.27
Petrolia (Canada)¶	2.20

*Posted by Pure Oil Co.
†Posted by Sun Oil Co.
‡Posted by Paragon Development Co.
§Posted by Stoll Oil Refining Co.
¶Posted by Imperial Oil Co., Ltd.
‖Posted by Standard of Indiana for boat shipment.

MEXICAN CRUDE

Panuco*	$ .64

*Based on October transactions for deliveries during October and December. Price exclusive of taxes.

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Exceptionally Profitable Year Shown

Earnings and Dividend Payments by Standard Group Criterion of Industry. Extra Disbursements Feature of Quarter

A. E. Mockler
New York Bureau, The Oil and Gas Journal

NEW YORK, Nov. 25.—Earnings and dividend payments by the Standard Oil group of companies, generally a fair barometer for the industry as a whole, indicate that 1929 will go down in history as an exceptionally profitable year for the American oil industry. The various companies comprising the Standard Oil group, according to a summary by Dow-Jones & Co., will establish a record this year in the aggregate sum of cash dividend payments, exceeding the previous high total of $218,740,335 distributed in 1928. Disbursements for the fourth quarter of the year also will reach a new high mark, exceeding the $62,050,357 for the corresponding period of last year and the record for the period of $62,-685,548, established in 1926. In the first nine months this year dividend disbursements in cash by the group amounted to $194,564,998, against $156,689,978 in like period of 1928.

For the fourth quarter not only have many of the companies continued extra disbursements of previous quarters, but some have increased the amounts to be distributed over and above the regular basis. In the case of Standard Oil Co. of Kansas, dividends have been resumed, with declaration of 25 cents extra and 50 cents quarterly, after a lapse of over five years.

To all intents and purposes the premier company, Standard Oil Co. of New Jersey, is on a straight $2 basis, having declared three extra dividends of 25 cents each and one of 12½ cents, the latter in first quarter, in addition to the regular quarterly dividends of 25 cents. Total for the year is $1.87½ a share, compared with $1.50 in 1928. The sum of dividends declared by this company, which has 24,834,638 shares of $25 par outstanding, is larger than that for any other company in the group.

In March this year Standard Oil Co. of Indiana paid a 50 per cent stock dividend, established an annual basis of $2.50 on the increased stock and paid an extra dividend of 50 cents. Recently the company declared another extra dividend of 25 cents, reflecting the increased earnings, but also to facilitate the exchange of Pan American Petroleum & Transport Co. stock. For the current year dividends total $3.25, equal to $4.87½ on the stock prior to the 50 per cent stock dividend; in 1928 the company paid $3.50 in dividends.

Standard of California

Standard Oil Co. of California early in November declared a stock dividend of 2 per cent with the regular quarterly cash dividend of 62½ cents. At 60 for the stock, the stock dividend is equal to $1.20, which, added to the $2.50 regular payment for the year, brings the total for 1929 to $3.70 a share. In 1928 the company paid $3 cash.

No extras have been declared by Standard Oil of New York, which is on $1.60 regular basis, the amount paid in 1928 and 1927. Vacuum Oil has authorized dividends totaling $4.25 a share for the year, including a special year-end distribution of 25 cents. The same amount was paid in 1928, of which $3.25 was on the increased stock following the 100 per cent stock dividend paid to stockholders of record April 14 that year.

Standard Oil Co. of Kentucky declared an extra dividend of 40 cents and the regular quarterly dividend of 40 cents, both payable December 31 to stock of record December 13.

Standard Oil of Nebraska's dividends for the year amount to $3.50, including four quarterly extras of 25 cents each. Company paid $3.25 in 1928. The regular basis of $2.50 has been maintained by Standard Oil Co. of Ohio on its common stock, the same as last year, and Union Tank Car, despite considerably increased earnings, has limited dividends to $5 for the year, as in 1928.

Four extras of 25 cents each have been declared by Atlantic Refining Co. this year besides the regular quarterly payments of 25 cents, making $2 for the year. Prior to the 4-for-1 split-up in the common stock in the latter part of 1928, company had paid three quarterly dividends of $1 each and toward the end of the year paid 25 cents on the larger amount of stock.

Ohio Oil Co., which has experienced a profitable year, recently increased its extra dividend to 50 cents, having paid 25 cents extra in the third quarter. With the regular $2 payment, its dividends for the year will amount to $2.75 a share, compared with $2 in 1928.

Humble Oil & Refining

Among Standard Oil of New Jersey subsidiaries, Humble Oil & Refining Co. has declared three extra dividends of 20 cents each in addition to the usual quart-

TRANSACTIONS IN OIL SHARES ON NEW YORK STOCK EXCHANGE

Quotations Compiled by Francis, Bro. & Co., Members of New York Stock Exchange, Kennedy Building, Tulsa, Okla.

1929 High	1929 Low	Week ended Nov. 23 Sales	High	Low	Close	Stocks—		Outstanding capital	Par value	Div. rate	Last paid	1926 High	1926 Low	1927 High	1927 Low	1928 High	1928 Low
42⅝	17½	9,200	22	21	21½	Amerada Corp.	(sh)	922,075	N.P.	50cQ	7-31-29	32⅞	24¼	37⅝	27⅝	43⅞	27⅛
64¾	15	8,500	22⅝	16⅛	20⅝	American Republics Corp.	(sh)	209,180	N.P.	.....	3-20-29	74	39⅞	82⅛	35⅛	85	51⅜
47¼	40½	8,000	40	40	40	Associated Oil		$57,260,300	$25	50cQ	9-30-29	60	44¾	50¼	35	53⅜	37½
77⅞	35	399	43⅝	40⅛	42⅝	Atlantic Refining		$50,000,000	$25	25cQ*	9-16-29	128⅜	97	131⅜	104	66⅜	50
49⅛	20	61,000	26¾	23¾	26⅜	Barnsdall Corp.		$45,235,650	$25	50cQ	8- 6-29	33½	23½	35½	20¾	53	20
47⅛	23	62,900	27½	22	27	Continental Oil of Delaware	(sh)	4,741,554	N.P.	.....	3-31-27	..	..	..	..	..	..
94¾	47	11,000	56	49	54¼	General Asphalt		$20,785,400	$100	.....	.....	94½	50	96¾	65	94⅞	68
109	23	22,600	52½	42	50½	Houston Oil		$25,000.000	$100	.....	.....	72	50¼	175¾	60⅛	167	79
39⅜	17¾	20,600	25¼	23½	24⅞	Independent Oil & Gas	(sh)	1.333.572	N.P.	50cQ	7-31-29	34	19⅝	32¾	17⅝	38⅜	21¾
53	13⅛	36,600	21⅞	19¼	21	Indian Refining		$12,307,370	$10	.....	5-31-24	12¾	7½	12⅛	7⅝	39⅝	9
38⅜	24	2,400	23	20½	23	Lago Oil & Transport	(sh)	3,992,122	N.P.	.....	5- 1-27	25⅞	16½	37¾	20½	39⅛	27⅜
18	7	15,300	10	8½	10	Louisiana Oil Refining	(sh)	1,190,063	N.P.	.....	.....	19⅞	12	18⅛	10	19¾	9⅜
18½	11¼	No sales.				Maracaibo Oil	(sh)	330,000	N.P.	.....	.....	28	16½	22¾	12	25½	12½
69⅜	9¼	52,200	19	13¾	18½	Mexican Seaboard	(sh)	1,276,873	N.P.	.....	12-15-20	13¾	6	9¼	3	73	4⅝
39⅞	23½	29,900	30⅜	27⅛	29⅜	Mid-Continent Petroleum	(sh)	1,857,912	N.P.	50cQ	8-15-29	37	20½	39⅜	25½	44½	25⅛
69	40½	4,500	1¼	1	1¼	Middle States Oil		$24,298,850	$10	.....	7- 1-23	2½	½	3¾	1⅝	7⅜	2⅜
69¼	10½	7,400	63	60	62¾	Pan American P. & T.		$50.084.700	$50	.....	10-20-27	76½	56⅛	65⅞	40⅛	54⅞	38¼
18½	13⅝	56,300	63	59⅝	62½	Pan American P. & T. "B"		$121,105.050	$50	.....	11-15-24	78⅜	56⅞	66⅜	40¼	58⅞	37⅜
..	..	No sales.				Pan American Western "B"	(sh)	400,000	N.P.	.....	1-30-27	46	30	37⅞	16⅜	28⅜	15½
15¼	5	2,100	5⅞	4¼	5⅜	Panhandle P. & R.	(sh)	199.370	N.P.	.....	.....	32	4½	18⅞	8	21¾	11½
76	47½	No sales.				Panhandle P. & R. pfd.		$2,564.400	$100	37½cQ	7- 2-23	99⅜	51	83	54	108	70
47	27	98,000	36	29⅝	36	Phillips Petroleum	(sh)	2.406,796	N.P.	37½cQ	10- 2-29	57⅜	40	60¼	36¼	53⅞	35¼
3⅜	1	5,100	1½	1⅛	1⅜	Pierce Oil Corp.		$29,622,831	$25	.....	.....	..	..	1⅛	½	5¼	⅛
5⅞	½	3,500	2¾	2½	2¾	Pierce Petroleum	(sh)	2,500,000	N.P.	.....	.....	7	2¼	5½	2½	7	3½
65⅝	40½	9,700	53½	47	53	Prairie Oil & Gas		$61.720.125	$25	50cQ*	9-30-29	60¼	48	55½	45⅝	68	46
65	45	14,600	58⅞	56	58⅝	Prairie Pipe Line		$101,250,000	$25	75cQ†	9-30-29	137½	122½	190	130¾	280	172
25⅞	4	4,300	8¾	6⅞	8⅛	Producers & Refiners		$37.438.950	$50	.....	9-15-23	20¾	11	33⅞	16¾	29⅞	16
46¾	30	149,000	31½	27	31½	Producers & Refiners pfd.		$2.845.350	$50	37½Q	5- 1-25	41¾	30¾	50	36⅞	49⅝	41
30¾	29⅛	21.800	24¼	22¼	23¾	Pure Oil		$75,959,250	$25	37½Q	9- 2-29	31	25¼	33½	25	31⅝	19
49⅝	20	13,900	30	28¼	29¼	Richfield Oil		$47,964,650	$25	50cQ	8-15-29	27½	22	28⅝	25⅜	56	23
64	43⅛	30,900	53⅞	52¼	52⅞	Royal Dutch, N. Y.	(sh)	611,303	$13.40	.....	8-13-29	57⅜	47⅜	54½	44¼	64	44⅝
55¾	43⅜	200	44¾	44¾	44¾	Shell Transport & Trad.		£19.654,274	£1	$1.45	7-23-29	48⅝	40½	47¾	41⅜	57½	40⅝
31¾	19	25,200	24⅞	23	24	Shell Union Oil	(sh)	13,000,000	N.P.	35cQ	9-30-29	31	24	31¾	24⅝	39¼	23¼
40⅛	18⅛	11,600	24⅜	18½	23½	Simms Petroleum		$8.060.380	$10	40cQ	9-14-29	25⅝	15⅛	25⅜	14¼	27¼	18⅛
45	22¼	100,900	28	24⅞	27⅞	Sinclair Consolidated	(sh)	5.500,000	N.P.	50cQ*	10-15-29	24⅞	15¾	22⅜	15	46¾	17⅜
111	103	800	109	109	109	Sinclair Consolidated pfd.		$16.025,250	$100	$2Q	8-15-29	99½	90	104½	97	110	102½
46½	28	9,100	34½	31¼	34⅛	Skelly Oil		$27,237,750	$25	50cQ	9-16-29	37⅛	26⅝	37⅜	24⅛	42⅝	25
81⅞	51½	21,800	63¾	60	62	Standard Oil of Cal.	(sh)	12,594.098	N.P.	62½cQ	9-16-29	63⅝	51½	60¾	50⅜	80	53
83	48	211,700	65½	58⅞	65	Standard Oil of N. J.		$620.079.800	$25	25cQ*	9-16-29	46⅜	37½	41⅜	35⅛	59⅜	37¾
48⅛	32	35,800	36	34⅛	35⅞	Standard Oil of N. Y.		$434,094.575	$25	40cQ	9-16-29	47¼	30⅜	34⅛	29¾	44¼	28¾
84¾	57	3,300	69½	62⅞	69½	Sun Oil	(sh)	1.297,627	N.P.	25cQ	9-16-29	41¾	30⅛	34⅞	30	77	31½
24	7⅝	9,300	8⅝	7¾	8½	Superior Oil Corp.	(sh)	2,324,938	N.P.	.....	12-20-20	..	..	..	..	..	..
71⅞	50½	41,100	56⅞	53⅛	56½	The Texas Corporation		$211.076.650	$25	75cQ	10- 1-29	58	48	58	45	74¾	50
23⅞	9¾	6,600	11⅞	10⅝	11⅝	Texas Pacific Coal & Oil Co.		$8,380.340	$10	5A‡	1- 3-28	19½	12	18⅞	12	26⅝	12⅛
40	27⅛	1,000	23½	19¼	22½	Tide Water Oil	(sh)	2.191.759	N.P.	20cQ	9-30-29	39¼	27	29⅛	19	41½	19⅝
97½	88⅜	400	88	85⅛	87¾	Tide Water Oil 5% pfd		$20.705,200	$100	$1.25Q	8-15-29	103	87¼	90⅛	85	100⅛	86
23½	12	2,700	14⅛	12½	13⅞	Tide Water Associated	(sh)	4.796,158	N.P.	.....	8- 1-27	27	20⅞	19⅛	15¾	25	14¾
15¼	5⅛	99,600	8⅝	7¼	8½	Transcontinental Oil	(sh)	3.742,029	N.P.	.....	.....	5½	3	10⅜	3¾	14¾	7¼
57	43⅛	10,500	46	43⅛	46	Union Oil of California		$94.798,100	$25	50cQ	8-10-29	58⅜	37¼	56½	39⅝	58	42⅜
163¾	121⅞	900	142	138	140	Union Tank Car		$31,061,200	$100	$1.25Q	9- 3-29	120⅜	84¼	127½	94	128⅛	110
42⅞	15	9,400	23	21	22⅝	Warner-Quinlan	(sh)	356.000	N.P.	50cQ	10- 1-29	30⅛	23½	34½	24½	44⅞	26
38	25	4,600	30	27	30	White Eagle Oil & Refining	(sh)	490.000	N.P.	50cQ	10-21-29	29¾	25⅛	27½	20	38	20⅛
29¾	13½	2,500	15⅜	15	15¼	Wilcox Oil & Gas	(sh)	2.400,000	N.P.	.....	5-10-28	..	..	..	..	..	.

*Plus extra dividend of 25 cents. †Plus extra dividend of 50 cents. ‡Payable in stock.

erly dividend of 30 cents for three quarters, and the total for the year will be at least as large as in 1928, when $2 a share was distributed. Company has had a profitable year and an increase in dividends would involve no strain on earnings, which in the first half-year were running at an annual rate of about $10 a share.

On March 1, this year, Imperial Oil, Ltd., paid 25 cents extra and 25 cents regular quarterly, and after the four-for-one spilt-up on May 31 declared three quarterly dividends of 12½ cents each. The new rate is equivalent to $2 on the old stock, on which $1.50 was paid in 1928. International Petroleum, Ltd., declared three dividends of 25 cents each in 1928, paid 25 cents on March 15, this year, spilt the stock two for on June 20, paid an initial dividend of 12½ cents on the new stock June 25 and increased the dividend to 25 cents on September 16.

Prairie Oil & Gas

Stock of the largest purchaser of crude oil in the Mid-Continent, Prairie Oil & Gas Co., was admitted to the list by New York Stock Exchange in December last year. In August this year company resumed dividends, declaring 25 cents extra and 50 cents quarterly for the third quarter and the same amounts for the fourth quarter. The company had been paying $1.50 annually prior to omission of dividends in October, 1927.

Foremost among the oil carriers, Prairie Pipe Line Co., now also listed on New York Stock Exchange, reduced the par value of its stock to $25 from $100 in January and declared a 25 per cent stock dividend, tantamount to a five-for-one spilt-up. This year it has authorized four extra dividends of 50 cents each and 75 cents regular quarterly, making $5 for the year, equal to $25 on the old $100 par stock, on which $13 was paid in 1928.

Illinois Pipe Line Co., which has a line serving the big Yates Pool of West Texas besides its other established operations, distributed $16 a share in dividends in 1928, when it reported earnings of $21.68 a share. Its dividends this year have been two semiannual distributions of $10 each.

Pipe Line Payments

Buckeye Pipe Line Co. has declared $2 in extra and $4 in regular quarterly dividends this year, making a total of $6, the amount that was distributed in 1928. Indiana Pipe Line Co. paid extra dividends amounting to $5 and regular dividends of $3 up to and including August 15 this year, on which date it also made a special distribution of $20 representing reduction in capital stock to $3,000,000 from $5,000,000. On November 15 it paid 25 cents extra and 50 cents quarterly. Company's cash dividends in 1928 amounted to $12 a share.

Several of the smaller eastern pipe line

(Continued on Page 149)

INDEPENDENT OILS ON NEW YORK CURB

Quotations Compiled by Francis, Bro. & Co., Members of New York Curb Market, Kennedy Building, Tulsa, Okla.

1929 High	1929 Low	Week ended Nov. 22 Sales	High	Low	Close	Stocks—	Outstanding capital	Par value	Div. rate	Last paid	1926 High	1926 Low	1927 High	1927 Low	1928 High	1928 Low
72	3/16	5,500	¼	¼	¼	Amer. Con. Oilfields	$11,018,000	$5	.....	.....	$6.75	.45	2 7/16	.55	1½	.53
8⅝	1⅛	3,000	2¼	2⅛	2¼	Amer. Maracaibo	700,000	N.P.	.....	.....	..	..	7½	2¾	9½	3⅛
5	1⅛	200	1¼	1¼	1¼	Argo Oil	683,971	$10	.....	.....	..	..	2¾	1	4½	2¼
62	7⅞	300	41	36	40	British-American	1,311,321	N.P.	25cQ	10- 1-29	85¼	60	40	20½	55	32⅝
4⅞	1⅝	9,900	1½	1¼	1¼	Carib. Syndicate	$131,250	25c	.....	.....	28⅜	9¼	28¼	15½	4½	3⅞
68½	20	198,500	30⅞	29	30½	Cities Service	24,290,359	N.P.	30cQ*	11- 1-29	..	..	58¾	40¼	90⅞	54
98¾	½	1,300	88⅞	86¾	87¾	Cities Service pfd.	1,500,000	N.P.	50cM	11- 1-29	..	..	95⅜	87	103½	94½
2	½	1,000	½	½	½	Colombia Syndicate	$2,000,000	$1	.....	.....	3½	1¾	3⅞	1⅛	3¼	.76
11⅛	2½	500	4½	4	4½	Cons. Royalty	$5,000,000	$10	15cQ	.....	..	..	9¾	6⅜	8⅞	6¼
11¾	5⅝	11,800	7¼	6½	7¼	Creole Syndicate	5,977,873	N.P.	.....	.....	16	10	14⅞	9½	17½	9½
9½	¾	No sales.				Crown Central	578,000	N.P.	.....	.....	..	..	3	.50	3¼	.76
26	7¾	3,200	9¼	8¼	8⅞	Darby Petroleum	1,019,392	N.P.	25cQ	10-15-29	7⅞	6¾	12	4	33½	3¼
11	2	900	5½	5	5½	Derby Oil & Refining	500,000	N.P.	.....	.....	..	..	2½	74	2¼	1
44	20⅞	No sales.				Derby Oil & Refining pfd.	48,500	N.P.	.....	.....	..	..	16¾	4	21⅛	7½
209	121⅛	5,800	137⅜	131⅞	136	Gulf Oil Corp.	4,504,921	$25	37½cQ	10- 1-29	98	92	118	86¼	165	101⅛
2⅞	⅞	5,900	⅞	¾	⅞	Intercontinental Pet.	$5,682,000	$5	.....	.....	$3.00	.83	2½	.80	3⅜	1
3⅝	1¼	4,200	2⅛	1¾	1¾	Kirby Petroleum	750,000	N.P.	.....	.....	..	..	2¼	1⅛	3	1¼
6¼	2¼	3,000	2⅞	2	2⅛	Leonard Oil & Dev.	$50,000,000	$25	.....	.....	12¼	5¾	10⅞	5⅛	9⅜	5⅛
38⅞	19	No sales.				Lion Oil & Refining	250,000	N.P.	50cQ	10-27-29	27	20	27½	20	43⅞	20
50	28	2,100	35	31	34¾	Lone Star Gas	5,000,000	N.P.	20cQ	9-30-29	46	30	59⅜	37	69⅛	48½
1¼	¼	3,700	⅜	¼	⅜	Magdalena Syndicate	850,000	$1	.....	.....	2⅞	1	2⅞	.80	1⅞	.50
38½	17¾	100	15	15	15	Margay Oil	160,000	N.P.	50cQ	10-10-29	34	12½	52	12	48½	32
6⅜	3	1,400	2⅞	2¾	2⅞	Mexico-Ohio Oil	.....	...	.....	.....	8	5½	12⅛	5	8	2¾
1½	⅝	700	¾	¾	¾	Mountain & Gulf	$4,000,000	$1	2cQ	10-15-29	1⅜	1⅛	1½	1	1¾	.76
22⅞	7	4,000	9⅞	8⅛	9⅞	Mountain Producers	$1,682,182	$10	40cQ	10- 1-29	26	23	29¼	22¾	28⅞	19½
5	2⅛	1,500	3	2½	3	New Bradford Oil	$1,095,291	$5	12½cQ	10-15-20	6⅝	5	5⅞	4⅝	5⅝	4¼
9⅜	2¼	100	3½	3½	3½	New Mex. & Arizona	$1,000,000	$1	.....	.....	..	..	16	9¼	11⅞	7⅛
18½	8¾	1,100	7½	6⅛	7½	North Central Texas	400,000	N.P.	15cQ	9- 3-29	..	..	12¾	9½	14¼	8½
3½	½	800	¾	⅝	⅝	Pandem	489,875	N.P.	.....	.....	10⅛	5⅞	9⅜	3¼	6	2⅛
10½	3¼	34,100	4⅛	3¼	4	Pantapec Oil	1,506,600	N.P.	.....	.....	12¼	11¾	12⅛	7	15⅝	8½
7⅜	4¾	No sales.				Pennok Oil	150,000	N.P.	.....	.....	22¾	12	13½	5⅛	7¾	4⅞
16	9⅝	No sales.				Red Bank Oil	250,000	N.P.	.....	.....	17	8½	24⅜	7	18	4⅞
8½	1⅛	2,900	3⅜	2⅛	3⅛	Reiter-Foster	388.584	N.P.	10cQ	9- 1-29	30¼	12	15½	3½	12⅞	4⅛
11	3	900	5⅝	4½	4⅝	Ryan Consolidated	500,000	N.P.	.....	.....	7	4½	7	4½	12	4⅛
5⅞	1	800	2⅛	1⅞	2⅛	Salt Creek Consolidated	1,286,300	$10	10cQ	10- 1-29	10	7⅛	8	5¼	7¼	5½
25⅞	9⅛	3,900	12⅞	10	11⅝	Salt Creek Producers	1,496,859	$10	50cQ	11- 1-29	35	24⅛	35½	27¼	35	23⅛
2½	1⅛	No sales.				Savoy Oil	$750,000	$5	.....	.....	6⅞	1¼	7	1¾	3½	1
145	82	No sales.				Transcontinental pfd.	157.500	$100	.....	.....	92	63½	92	63½	93¼	75
6½	1¾	10,800	2⅜	2	2⅜	Venezuelan Petroleum	755.090	$5	5cQ	8-15-29	8	4½	7⅞	4¼	9⅛	4¾
9⅛	4	600	3⅝	3⅝	3⅝	Woodley Petroleum	$500,000	$1	.....	.....	8⅛	5½	7	4⅜	8¼	4⅞
2⅞	⅛	200	1⅛	1⅛	1⅛	"Y" Oil & Gas (new)	100.000	N.P.	.....	.....	6½	6	6	1¾	8⅜	2⅛

*Including extra in stock.

STANDARD OIL STOCKS ON NEW YORK CURB

Quotations Compiled by Francis, Bro. & Co., Members of New York Curb Market, Kennedy Building, Tulsa, Okla.

1929 High	1929 Low	Week ended Nov. 22 Sales	High	Low	Close	Stocks—	Outstanding capital	Par value	Div. rate	Last paid	1926 High	1926 Low	1927 High	1927 Low	1928 High	1928 Low
18	13¼	5,700	17	14⅜	17	Anglo-American Oil	£4,192,635	£1	.....	6- 5-29	21	16	21⅝	17⅞	22⅜	14⅞
2½	1	100	1	1	1	Atlantic Lobos	500,000	N.P.	.....	.....	..	..	3¾	¾	5	1¼
46½	25½	No sales.				Borne Scrymser	$1,000,000	$25	$1S.A.	10-15-29	76	65	69	50	56½	44½
74¼	55	200	60	58	60	Buckeye Pipe Line	$10,000,000	$50	$1Q	9-14-29	59½	42	60	45	76	53
210	125	200	140¼	137½	140¼	Chesebrough Mfg.	$3,000,000	$25	$1Q*	9-30-29	82½	65	126	76½	161	117
29	8	300	15½	14⅞	15½	Continental Oil	$36,057,840	$10	.....	12-15-27	25⅞	17½	22⅝	16¼	23	16
95	45	150	44¾	41	41	Cumberland Pipe Line	$1,500,000	$50	$1Q	9-15-29	137	102	137	89	114	67
70⅛	49¾	200	43	42	42	Eureka Pipe Line	$5,000,000	$100	$1Q	11- 1-29	63¾	43	68½	47	88	64⅛
6⅝	5	No sales.				Galena Signal Oil	$16,000,000	$100	.....	.....	32½	9⅞	13½	3½	13	4¼
128	72½	4,800	90⅞	81	90⅛	Humble Oil & Refining	$74,103.300	$25	30cQ†	10- 1-29	68½	52	68½	54	114¾	59¼
340½	285	800	267½	261¾	265	Illinois Pipe Line	$20,000,000	$100	$10S.A.	6-15-29	144½	125½	182	123¾	290½	176½
41	22	4,700	28⅞	27	28⅝	Imperial Oil Co., Ltd.	26.421.768	N.P.	12½cQ	9- 3-29	..	..	64¾	37¾	104	56¾
33¾	26⅛	400	31¾	30⅛	31¾	Indiana Pipe Line	$3.000.000	$10	50cQ‡	11-15-29	72½	58	94½	61	91⅞	74⅝
30⅜	15	12.000	22⅛	20⅝	22	International Pet.	14,247,088	N.P.	12½cQ	6-25-29	35½	28¾	29	28¼	55	35
25⅞	12	5,000	21⅞	17⅛	21	National Transit	$6.362.500	$12.50	25cQ	9-26-29	20⅜	12½	24	13½	32⅜	19⅜
16	10	No sales.				New York Transit	$1,000,000	$10	40cQ	10-15-29	51½	27¼	44½	31¼	75	38½
63	45	100	50	50	50	Northern Pipe Line	$2,000,000	$50	$2S.A.	7- 1-29	80½	64	100	70	69	56½
79⅛	64⅛	3.300	68¾	68	68¾	Ohio Oil	$60,000,000	$25	50cQ‡	9-16-29	67¾	55¾	67⅞	52	84	58½
44½	21	800	20	20	20	Penn Mex. Fuel	$10,000,000	$25	50cQ	12-15-28	24¾	15	39	12	84	28
50	34⅞	100	33⅞	33⅞	33⅞	Solar Refining	$4,000,000	$25	$1.25S.A.	6-20-29	..	..	..	..	..	..
22½	13	5,500	22½	21	22½	Southern Pipe Line	$1,000,000	$10	50cQ	.....	74½	61½	27¼	15½	19	15
60¼	35⅛	1,500	41⅛	40⅛	40⅝	South Penn Oil (new)	$30,000,000	$25	50cQ	9-30-29	50	34½	41½	35	71⅞	36¾
70	60	200	49¾	49½	49¾	Southwest Pa. Pipe Lines	$1,750,000	$50	$1Q	10- 1-29	56	47½	83	55½	102	70
64	45	65,800	54¾	51¾	53⅞	Standard Oil of Indiana	$348,175.069	$25	62½cQ	9-16-29	70½	60½	81½	64⅝	95⅞	70⅞
32½	18	1,800	30⅝	28⅛	30	Standard Oil of Kansas	$8.000.000	$25	.....	6-16-24	36½	16½	20⅞	14⅝	37¾	15
46⅞	35⅛	4,900	37¼	35⅝	37	Standard Oil of Kentucky	$25,654,516	$10	40cQ	9-30-29	134⅜	108	130	111½	179¾	122¼
50¼	45	200	42	42	42	Standard Oil of Nebraska	$4,649,225	$25	62½cQ‡	9-30-29	51⅛	42	49½	40	54⅞	39⅞
129	60	5,500	89	86	86	Standard Oil of Ohio	$14,000,000	$25	62½cQ	10- 1-29	372	288	87½	72	134	71
18	10	100	10	10	10	Swan-Finch Co.	$861,466	$25	.....	1-15-29	21	15	21	14½	23½	16
133¼	75	5,200	97	93½	96⅝	Vacuum Oil Co.	$126,180,350	$25	$1Q	9-30-29	109⅜	90¼	..	..	111	72

*Plus 50 cents extra. †Plus 20 cents extra. ‡Plus 25 cents extra.

TENTATIVE CODE FOR TESTING FUEL OIL

(Continued from Page 131)

combustion furnace is specified on account of better temperature control than with a gas-heated furnace. The combustion tube should be of fused silica, glazed both inside and outside. To permit observations of the sample, the combustion tube is provided with a 10 to 12-centimeter transparent section."

Heavy Fuel Oil

A sample of approximately 1.2 grams is burned in an open silica boat in the same manner as described for coal and coke in the A.S.T.M. methods except that more care is required in heating the sample to prevent too rapid volatilization of the oil. The bottom of the boat should be covered with from 15 to 20 grams of black copper oxide powder.

Kerosene, Naphtha and Gasoline

These petroleum products are too volatile to be burned in an open boat so it is necessary to place the sample in a glass bulb having a constricted neck. The glass bulb is weighed empty and 0.1 to 0.15 gram of the oil is introduced by means of a small wash bottle provided with a capillary delivery tube which can be inserted.

Flue Gas Analysis

The code also specifies the manner in which a flue gas analysis shall be made. This includes sampling and testing of the flue gas. The code specifies that the standard flue and exhaust-gas sampler shall consist of a single open-ended iron, copper or glass exploring tube of one-fourth to three-fourths-inch diameter and of which the open ends are placed at such positions that the collected sample has a composition representative of the average composition of the gas being sampled. A determination of such positions will require preliminary exploration and judgment. Pockets back of dampers and at bends shall be avoided.

"The thermometer bulb or hot junction or other device used for temperature measurements shall be placed as near the open end of the sampling tube as possible and in such a position that the stream flow impinges freely on the temperature-responsive elements, but of course not so as to interfere seriously with gas flow into the sampling tube. The best form of pyrometer is that known as the suction pyrometer.

"The thermometer or hot junction must be protected from radiation to colder or hotter surfaces which may be in the vicinity, by providing metal, asbestos, or other shields so placed in the gas stream that no direct radiation can take place between the bulb or hot junction and the hot or cold surface.

Taking Sample

"The gas sample shall be carried from the sampling pipe (Figure 1) in a single tube to the bottle A for separating of condensed moisture and tars. This bottle contains a Bunsen check valve through which gas may be aspirated continually by means of steam or air aspirator. The aspirating process shall be strong, continuous and at a uniform rate. When it is desired to take the sample, sample line shall be purged by means of the aspirator. The three-way cock is then manipulated to draw the gas sample into the header and burette and push it out again to atmosphere by means of the leveling bottle. This insures that the header and connections are all completely filled with a fresh sample of gas. The sample itself is then drawn into the burette and the excess pushed back out through the atmospheric vent of the three-way cock.

"The pipettes shall have metal strips bent zig-zag fashion as shown, or shall contain glass tubes to offer surface for the absorption of the gas. The oxygen and CO pipettes shall be connected preferably to a glass tee which is connected to a fourth pipette for sealing the solution in the pipettes from the atmosphere. When it is impractical to install the fourth pipette as shown the oxygen and CO pipettes shall each be connected to its own rubber sealing bottle. If water is used in the bottle A it shall be saturated with the gas being analyzed, or concentrated brine may be used. It is preferable to have sample drawn directly into the gas analyzing apparatus.

"The gas sample may be collected in quantities proportioned to the rate of burning fuel, or they may be collected in equal quantities at equal intervals of time. In the latter case the average analysis of the gases must be arrived at by weighing the separate determinations proportionally to the weights of fuel burned during the times of collecting the samples from which the analysis is made. Whenever possible the analysis shall be made immediately after collection of the sample.

Flue-Gas Analysis

"In general, gas samples collected in the manner described above shall be analyzed for CO_2, CO, and O_2 by means of an Orsat apparatus. When more than 0.5 per cent of CO is present the carbon monoxide shall be removed with two cuprous chloride pipettes. When hydrogen and hydrocarbons are to be separated out, the modified Orsat such as devised by Col. G. A. Burrell and known as the Burrell gas-analyzing apparatus shall be used. In place of mercury a saturated salt solution may be used in the leveling tube."

PREFER TO PAINT NEW OIL DRUMS AT PLANTS

(Continued from Page 131)

scraped off by the angle iron may be easily covered if necessary.

A ventilating fan is necessary when the spray gun is used. Ordinarily the table and drum are enclosed on the sides, back and top by sheet iron, so that only the front is open to permit the operator to place the drum on the table to paint it. The enclosure is shaped somewhat like a funnel so the ventilating fan is able to draw the paint fumes away from the operator and exhaust them on the outside. The fan is set about 1 foot off the floor, is heavily guarded, and the motor should be of the induction type. An 18-inch fan has been found satisfactory for removing the fumes. Smaller fans have proven inadequate.

REFINED OIL PRICES ARE STEADY IN EAST

(Continued from Page 135)

bbls., compared with 1,420,000 bbls., a daily average of 202,857 bbls., for the previous week and a daily average of 284,179 bbls. for the four weeks ended November 16. Details follow:

	Bbls. of 42 gals.
At Atlantic Coast Ports—	
Baltimore	328,000
Boston	285,000
New York	895,000
Philadelphia	247,000
Others	146,000
Total	1,901,000
Daily average	271,571
At Gulf Coast Ports—	
New Orleans and Baton Rouge	64,000
Tampa	40,000
Total	104,000
Daily average	14,857
At all United States Ports—	
Total	2,005,000
Daily average	286,428
Daily average four weeks	284,179

California Oil Receipts

Receipts of California crude and refined oils at Atlantic and Gulf Coast ports for the week ended November 16 totaled 526,000 bbls., a daily average of 75,143 bbls., compared with 712,000 bbls., a daily average of 101,714 bbls., for the previous week and a daily average of 66,107 bbls. for the four weeks ended November 16. Details follow:

	Bbls. of 42 gals.
At Atlantic Coast Ports—	
Baltimore	172,000
New York	216,000
Philadelphia	138,000
Total	526,000
Daily average	75,143
Daily average four weeks	86,107

There were no receipts of California oils at Gulf ports during the week.

Distribution of total California oil receipts at Atlantic Coast ports for the week was as follows:

Gasoline	443,000
Kerosene distillate	83,000

GASOLINE HIGHER IN CHICAGO AREA

(Continued from Page 134)

cline will benefit the fuel oil industry. Little fuel oil is being offered and the increase in stocks has been at least stopped according to the latest reports. The Mid-Continent refiners apparently have accumulated some of every product except gas and fuel oils. Occasional lots of what may be distress oil are offered or some refiner decides to sell instead of holding and cracking his fuel oil, but these lots have been quickly absorbed and the market seems capable of absorbing still further quantities of heavy fuel oils. A good 18-22 zero fuel oil can be purchased at 70 cents either for spot or deferred deliveries but there is little that can be found at less than 67½ cents that is desirable. The market is holding its own and every day that it holds brings the season of enlarged demand nearer.

Lubricating Oils Becoming Popular

Lubricating oils are becoming popular with refiners. More and more refiners are offering lines of lubricants. The ones who have been longest in the business are bringing out new and, according to the prospectus, improved grades, and it is evident that the buyer of lubricating oils either for resale or for consumption will have a multiplicity of offerings from which to make his choice. All of this competition cannot increase the number of users of the oils nor greatly add to the consumption. In fact most of the new products are offered with the assurance that they will last longer and as much does not need to be used. It might be that the quality of the oils will be so improved that in spite of the increase in the number of the cars and other forms of machinery that require lubrication, the volume of oil used will be decreased.

The refiners are now making some contracts for next year on their bright stocks and the usual agreement is for the stocks to be billed at the market with a minimum of 33 and a maximum of 39 cents. They are asking at present 37 cents and holding that price firmly. Several of the larger users have not yet made any contracts for next season. Some recall an old saying regarding December contracts being made to be broken.

The jobbers have decided in their own minds that a decline in the tank wagon scale over the territory is inevitable and that it will come shortly. Executives of the leading distributors reply that if the jobbers know this they know more about it than the distributors themselves do. Yet there is a general understanding that the tank wagon market will be reduced some time around the first of next month. If the outlook were better than it is right now in the tank car market there might be little difficulty in holding the wagon prices until the beginning of the coming year.

Motorist Paying Reasonable Price

The motorists are buying at reasonable prices for the services which they get from their purchases except for the state taxes, regarding which there is no complaint. The only real reason for a reduction seems to be the low prices quoted to distributors and their cutting of prices on account of the opportunity created by the low prices. One of the refiners said that the only way that he saw was to cut the crude runs and that they could not afford to do that. Back of all the condition is the feeling that if runs are cut and the refiner is not drumming the trade every day the latter will forget the refiner, who will lose that business for all time.

There has been price cutting going on and several points are as badly cut as was Chicago before the special reduction of 2 cents some two weeks ago. They are large cities such as Detroit, Kansas City and St. Louis which are in bad shape, but if the distributors begin to take cognizance of all the cut points the situation will become intolerable and force a real reduction. Some jobbers have asked when the code of trade practices is to go into effect. They state that they do not see any evidences of a change in the methods of the larger refiners who they assert are soliciting them for business even when the refiner knows that the jobber is under contract. It is stated that pumps are being given away and lighting fixtures furnished and even cement work done just as in the old days before the code was dreamed of.

UNIT OPERATION IN THE ROCKY MOUNTAIN AREA

(Continued from Page 42)

control it must rest with the states, and suggested that the oil producing states work out Interstate Compacts which might meet with the approval of congress. Due to the uncertainty of the Compact idea being constitutional and the fear of antitrust laws, the industry was still groping in the dark.

Meanwhile, the condition of overproduction had become so acute and the industry had been warned so often that it must either solve its own problems or it would have outside regulation forced upon it, that in desperation many and sundry plans of curtailment of drilling and proration of production have been developed with rather gratifying results, in that they have tended to maintain a semblance of balance between supply and demand of crude oil, and have shown what co-operation within the industry can do with no further action from the State than approval of the agreements, but these are only temporary expedients to employ in extreme emergencies and are unusually difficult to administer. It has been pointed out that when overproduction forced down the price of farm products, congress and the Government urged the farmers and the cotton growers to restrict planting in accordance with the market demand because depression in the farming and cotton industries affected the prosperity of the whole country.

Unit Development Only Cure

What is good advice for the farmer and cotton grower should be equally as good advice for the oil industry. If the entire average oil structure were owned by a single operator, there would be no need for overproduction. The structure could be developed under the best known methods and produced to meet the market demands. This, of course, is an ideal condition and exists to a large extent only in some of the foreign oil countries. In the United States where the ownership of an oil pool is divided among a number it is apparent that the only permanent cure for the evils of overproduction is unit development of the entire structure.

I. L. Dunn and James O. Lewis in a paper presented before the A.I.M.E. in 1926 set forth the advantages of unit operation in new pools very fully, and a copy of this paper should be in the possession of every petroleum engineer and executive in the country. This paper was printed in "Petroleum Development and Technology in 1926," petroleum division of the A.I.M.E., and also appeared in the October 14, 1926, issue of The Oil and Gas Journal. In the paper the authors define unit operation as:

"The developing and operating of oil pools under one management so as to make possible the application of the best principles of business, engineering and science. The proposal is to do away with the division of ownership of the oil underground, based upon property lines at the surface, and to recognize the fact that a pool of oil is a natural and indivisible unit that should be operated as such for the common good."

Advantages Set Out

The advantages of the unit plan of operation are set out briefly by these writers as follows:

1. A pool of oil is a natural unit, no matter how large, and operations cannot be conducted independently without increasing costs and reducing both recovery and profits.

2. Important savings in development and production costs can be made by reason of operating on a larger scale without the necessity of undue haste and with the opportunity for carefully working out a development program in advance.

3. Important savings can be made in

the number of wells drilled, which can also be more effectively located so as to get the maximum production and to minimize the waste of gas and oil.

4. Unit development would also permit the use of improved production methods most of which rely upon the control of pressure in the sand, including back pressure, stop-cocking, gas or air lifts, holding in of gassy wells.

5. Under unit development artificial pressure can be applied earlier, and possibly the wells can be flowed throughout the life of the field. Production can be sustained over a longer period and can be controlled more in accordance with the price of oil, which would minimize the disastrous fluctuations in oil prices.

6. Profits would be increased and, under conditions as at Cromwell, should be several times those realizable under competitive operation.

7. Unit development would be in the public interest, as it will increase and prolong supply, will create more capital, and reduce the final cost of products to the consumer.

Can Overcome Difficulties

The habits and practices, both good and bad, of the oil industry, are of long usage and firmly established and cannot be wholly changed overnight. Many of the difficulties come from land and legal questions and discussions of equity, and the human nature elements of suspicion and greed further complicate the problem, but all of these difficulties can be overcome if fair play and a spirit of give and take is shown by the industry.

It has been my privilege to examine a number of proposed unit operation plans, most of which have failed because of the overzealousness of the engineer in trying to obtain for his company, in advance, the last one-half barrel of oil which he believes the property is capable of producing. As a result of the engineer's activities the owner has placed a value on his particular property far in excess of the value placed on it by the operators concerned.

Before Drilling

It is my personal belief that to obtain the most beneficial results from a unit plan of operation the plan should be worked out before any well has been drilled on the structure under consideration; then, if the engineer will keep in mind at all times his own statements that gas is the prime mover for oil and that the proper use of gas will obtain a larger ultimate production per acre from the entire structure, he will be fully justified in his belief that an acreage prorate basis for the entire structure is fair and equitable to everyone concerned and that the ultimate benefits from such a plan will fairly offset any immediate benefits which may possibly be obtained by holding out for a division of the oil at the beginning. The agreement under this plan must be sufficiently flexible to allow minor adjustments to be made after the productive limits of the field are actually defined. This plan can be applied equally as well to settled production pools. In a flush production pool with only one or a few wells drilled it becomes difficult or at times impossible for a group of owners to reach an agreement upon the relative value to be assigned to different tracts, unless the spirit of give and take already mentioned is manifested. Having reached an agreement as to the acreage prorate it should be a comparatively simple proposition to work out a practical plan of transferring the individual interest to an operating company in such a way as to make equities of everyone concerned fully protected.

It is a serious reflection on the oil industry that in spite of its present poor economic condition such drastic action had to be taken as was recently adopted in the California fields and it is to be hoped that the oil industry has finally learned its lesson and that we may not see the time when it will be necessary to again take action of such a nature. We are fortunate indeed in the Rocky Mountain district in having operators who have consistently shown their willingness to co-operate and put forth every effort to develop our fields, both oil and gas, in a sane and orderly manner.

WHO'S WHO IN NATURAL GASOLINE MANUFACTURE

(Continued from Page 137)

manufacturing department, H. A. Trower general sales manager and M. E. Foster manager of tank car sales.

Following is a list of plants giving location and daily capacity:

Location—	Daily plant capacity gallons
SW NW Section 16-18-28, Eddy County, New Mexico	9,000
NW NE Section 11-15-12, Okmulgee County, Oklahoma	10,000
W half SW Section 32-27-6, Osage County, Oklahoma	42,000
West cent. part G. Green farm or SE Section 8, T.&P.R.R. Survey, Block 5, Stephens County, Texas	15,000
NE SE Section 21, Block Y, A.&B. Survey, Hutchinson County, Texas	40,000
NE W half Section 62, Block B-2, H.&G.N.R.R. Survey, Gray County, Texas	85,000
NW SE Section 1, Block X02, Hutchinson County, Texas	25,000
West cent. portion Section 115, Block 5, I.&G.N.R.R. Survey, Carson County, Texas	20,000
SW Section 2, Block 8, T.&N.O.R.R. Survey, Stephens County, Texas	12,000
NW SW Section 33-11-8, Seminole County, Oklahoma	37,500
NE NE Section 26-27-5, Osage County, Oklahoma	45,000
SE NW 24-11-11, Okfuskee County, Oklahoma	17,000
6.88 acres N half Survey 1,174, T.E. &L., Stephens County, Texas	12,000
5 acres SE SW Section 51, T.&P. Survey, Block 6, Stephens County, Texas	3,500
E half Section 32, Block B-2, H.&G. N.R.R. Co. Survey, Gray County, Texas	85,000
SE corner Thomas Mulryne Survey, A 377 H.&T.C., Block 1, Eastland County, Texas	12,000
W. centr. part W. A. Eaken 132-acre tract, Eastland County, Tex.	20,000
SE 20 P. J. Humphrey Survey A 153, Young County, Texas	9,000
12 A., Section 63, Block 4, T.&P.R.R. Survey, Stephens County, Texas	5,000
W half SW Section 19-21-7, Claiborne Parish, Louisiana	10,500
NW Section 28, B.A.L., Shackelford County, Texas	45,000
Cen. 60 A. 5½ Section 69, Block 46, H.&T.C. Survey, Hutchinson County, Texas	50,000
NE cor. Section 56 and SE cor. Section 65, Block 25, H.&G.N.R.R. Survey, Gray County, Texas	10,000
E half NE Section 16-27-5, Kay County, Oklahoma	42,000
NE NE Section 216, C.C.S.D. & R.G. N.G.R.R. Survey, Block F, Crane County, Texas	75,000
SW cor. B. F. Satterwhite 200-acre tract, Block 15, T.&P.R.R. Survey, Block 6, Stephens County, Texas	2,500
W half NW NW Section 1-18-5, Payne County, Oklahoma	3,000
20 A. SE cor. R. D. Owens Survey, A, 2,249, Young County, Texas	7,500
17.61 A. T-E-&L. Survey, Block 2,-403, Archer County, Texas	10,000
SW NW Section 12-25-11, Osage County, Oklahoma	5,000
W half SW Section 88, Block B-2, H.&G.N.R.R. Survey, Gray County, Texas	50,000
SW Section 113, I.&G.N.R.R. Survey, Block 5, Carson County, Texas	15,000
SE cor. Mary Whitley Survey, Block 5, Hutchinson County, Texas	50,000
SE SE Section 16-24-10, Osage County, Oklahoma	14,000
North NW Section 22, Block Y, A. &B. Survey, Hutchinson County, Texas	45,000
SW SW Section 17, T.&P.R.R. Survey, Block 8, Stephens County, Texas	12,000
20 A. north centr. J. Garrett Survey, A. 108, Young County, Texas	9,000
5 A. NW Section 12-14-6, Lincoln County, Oklahoma	10,000
Section 81, Block 46, H.&T.C.R.R. Survey, Hutchinson County, Texas	15,000
SW NW Section 33-8-8, Seminole County, Oklahoma	40,000
North half NW Section 3-9-9, Hughes County, Oklahoma	50,000
8 A. West half NE Section 43, T.& P. Survey, Block 6, Stephens County, Texas	6,500
SE Section 3, Block B-3, D.&S.E. R.R. Survey, Hutchinson County, Texas	45,000
Total capacity, gallons	1,131,000

CARE IN OPERATION OF STEAM PUMP NECESSARY

(Continued from Page 137)

lead mixed with good oil, being careful not to get dirt, or grit on the bearing.

Maintenance

The term care is used in the sense of maintainence; that is, in the constant running of an engine or pump. Certain supplies, such as oils, packing, gaskets, etc. must be adjusted and renewed from time to time as required. The object of a packing is to prevent a leak of any fluid which may be either a liquid or gas. This may be a comparatively simple case as when gaskets are used to prevent steam escaping at a joint, or it may be quite complicated, as by the use of packing on piston rods.

The way which a packing is applied varies greatly according to material, position, finish of faces of joint, nature and duty of part to be packed.

NEW JERSEY STANDARD TO ACQUIRE ANGLO-AMERICAN

(Continued from Page 138)

ceptance being received from not less than two-thirds of each class of Anglo-American Oil Co. shares presently outstanding and will remain open until the close of business January 31, 1930. However should the acceptances received to that date be less than the said two-thirds but more than one-half of each class of shares then we reserve the right to extend the date by which acceptances of this offer must be lodged until the close of business February 28, 1930."

F. E. Powell, Anglo-American Corp. in presenting the proposal to his stockholders says: "Your directors submit herewith a proposal received from the Standard Oil Export Corp. to exchange the shares of that corporation for shares of the Anglo-American Oil Co. limited. The Standard Oil Export Corp. is a company owned jointly by the Standard Oil Co. of New Jersey, Standard Oil Co. of Louisiana, The Carter Oil Co. and Humble Oil & Refining Co. It controls the export business of these large and important producing and refining interests from which in the past the products marketed by your company have been largely drawn. Your companies' activities are entirely confined to the marketing side of the business and your directors have in mind that under existing conditions a purely marketing company is at a considerable disadvantage. Your directors therefore consider that it would be to the shareholders' interests to exchange their Anglo shares for guaranteed shares in a company closely associated with powerful producers and refiners and have no hesitation in strongly recommending them to accept this offer." The offer of Standard Oil Export Corp. to take over Anglo-American through an exchange of stock effectively disposes of reports that Anglo-American was to become united in the proposed merger of Standard Oil Co. of New York and Vacuum Oil Co.

ANNOUNCE RULING IN POSTING OF PRICES

(Continued from Page 138)

conveniently accessible during business hours to the public, and adhere to such prices until new ones are posted.

"The posting of prices under this Rule means the posting of tank car prices, tank wagon prices and service station prices at the respective places from which deliveries are made. Tank car prices should be conspicuously posted at terminals where tank cars are loaded and at the refinery or refinery office, tank wagon prices at the bulk plant or wholesale distributing centers and service station prices at all service stations. By tank car prices is meant spot prices, prices at which sales are made under contract, and all allowances made from either spot or contract prices. The posting of tank car prices may be either on the basis of f.o.b. loading point, at destination, or in any other manner which will clearly set out the price actually paid by the purchaser.

"Commercial accounts need not be posted when they apply only to written contracts for charge accounts for the delivery into commercial vehicles properly licensed and used for the transportation or delivery of passengers, merchandise, freight or express. Only vehicles bearing a commercial license and used in a commercial business are entitled to the commercial discount.

"In states which do not issue special licenses to commercial vehicles, a price not posted should be allowed only to such vehicles as are usually licensed under the commercial series by nearby states which do issue special licenses to commercial vehicles. Trucks, buses and taxicabs are generally regarded as being commercial vehicles. Vehicles bearing pleasure car licenses, whether operated by salesmen, executive, employes or dealers, are not entitled to the commercial discount. Any deviation from this practice requires the posting of the price."

Painting Properties

A new interpretation also is given Rule 10, page 14, of the handbook, covering the painting of property and provision of equipment to service stations. It follows:

"The restriction of painting for dealers to the companies' standard signs is understood to mean the customary standard signs of the various companies with such border painting as may be necessary to give the standard sign proper display qualities; but this does not include the painting of garages, service stations or other buildings, or large wall signs or other unusual painting, although such painted matter may be the design or the company's standard sign or the company's colors. This is not intended to prohibit the painting of stations owned or leased by refiners, distributors, jobbers or wholesalers.

"The provision in this rule that air compressors, greasing lifts, tanks or similar equipment shall not be loaned or furnished by refiners, wholesalers, distributors and/or jobbers to dealers means that such equipment shall not be sold, leased, exchanged or furnished in any way by the companies to dealers; and contemplates that the companies are not to sell or handle such equipment except for their own use and in the case of airports as provided in Rule 8 hereof."

Installation Costs

The interpretation of Rule 1, which concerns installation costs to be charged against station operators, is expanded by addition to the third paragraph (page 7, August 2, handbook), of the following:

"The cost of installation of gasoline or kerosene pumps and tanks is defined to be the entire cost of the labor and material (including piping, fittings, concrete work, electric wiring and connections) required to install such equipment ready for operation. It does not include the cost of the pump and tank, foot valve, fill box and the expense of transportation, expressage or drayage."

A new interpretation has been provided for Rule 3, which prohibits a company from painting over the signs or colors of another until after communication with the other company concerned. It follows:

"This rule does not prohibit the painting over of any sign or colors of a supplying company, not protected by contract, with a neutral color when the dealer transfers his account from the company whose signs or colors are being obliterated to another company. By a neutral color is meant a color not customarily used in the painting of the service stations of the company to which the account is transferred."

NEW NATIONAL CHAIRMAN

DALLAS, Tex., Nov. 23.—Appointment of E. H. Williams, of the National Supply Co., Toledo, Ohio, as national chairman of the American Petroleum Institute's Special Committee on the Standardization of Cable Drilling Tools has been announced by Carl A. Young, director of the Institute's Division of Standardization. Mr. Williams succeeds Thomas Fleming, Jr., formerly of the Oil Well Supply Co., Pittsburg, Pa., who resigned upon severing his connection with the oil business.

BAYOU BOUILLON ELECTRIFIED

HOUSTON, Tex., Nov. 25.—Complete electrification of the Bayou Bouillon Field, St. Martin Parish, Louisiana, is under way by Rycade Oil Corp. and Humble Oil & Refining Co., joint operators. Power for the field, the first swamp field on the coast to be completely electrified, will be provided over a high line just strung by the Louisiana Electric Power Co. from a point on its high line between Baton Rouge and Lafayette. The line to the field is 10 miles long.

OUTLOOK BRIGHTER FOR PETROLEUM INDUSTRY

(Continued from Page 39)

for the cracking operation, is causing all refinery operators to either install new cracking units or modernize their old equipment so that they secure the maximum yields of motor fuel at the lowest possible operating cost.

Even in the lubricating oil operation where operating methods and equipment showed little change for many years, new practices are now being introduced. In some installations this new method of processing is being tied in with the skimming operation so that operators are installing new stills to handle the first distillation and fractionation of the crude oil.

The power plants are being rebuilt in line with those adopted by other manufacturers who use large quantities of steam for power plant operation and refinery processing. New treating methods improved storage facilities and new compounding equipment are reflected in refinery improvement programs.

Pipe Line Expansion

While the phenomenal expansion in oil and natural gas trunk pipe lines during 1928 and 1929 can hardly be expected to continue through 1930 at the high level which has existed during the two previous years mentioned, a number of large projects are under consideration with indications definite action looking towards construction of these lines will be taken early in 1930. The natural gas industry has been enjoying exceptional prosperity and the extension of pipe lines for that industry during the past two years has been greater than during any previous period in the history of the industry. Construction of large, long distance, high pressure lines has been carried on to successful completion with the result ideas have changed regarding the distance natural gas can be transported safely and profitably.

At this time a plan is under consideration for the construction of a 500-mile line from the Texas Panhandle and Oklahoma to Omaha, Neb. This line will cost about $24,000,000. Another large project which may be started within the comparative near future is the proposed natural gas line from the Texas Panhandle to the Chicago area. This line would mark the largest pipe line project ever attempted and would be approximately 950 miles long.

The Pacific Gas & Electric Co. of California has ordered pipe for its second big natural gas line from the Kettleman Hills district to San Francisco.

While no additional long oil trunk pipe lines are contemplated at this time, the oil pipe line companies are extending their lines continually, insuring considerable work and the purchase of large quantities of equipment. This work will increase as the consumption of crude and its products grows and production of crude oil declines. Numerous areas throughout the country have a crude oil production now in excess of pipe line facilities and it is necessary to curtail output in these sections. Pipe line companies have been co-operating in the conservation movement and additional pipe line facilities will be provided for the different flush producing areas as production from these areas is needed by markets.

JOSEPH MONCRIEF DIES

Joseph Moncrief, age 55, of the oil firm of Thomas & Moncrief, died at Winfield, Kans., November 22. He was interested in production in the Thoms Pool in Oklahoma; the firm also owns considerable wildcat acreage in Western Kansas.

DEATH OF H. L. CULPEPER

H. L. Culpeper, 45 years, secretary-treasurer of the Cal-Cul Oil Co. of Okmulgee, Okla., died November 24, of injuries suffered in an automobile accident near Jenks, Okla.

UNIT DEVELOPMENT RATIFIED IN THE VAN ZANDT DISTRICT

By L. E. Bredberg
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., Nov. 25.—Blocking and checkerboarding of acreage has not slackened whatsoever in the Van Zandt district, and royalty buying continues quite actively since the Pure Oil Co. brought in its No. 1 Jarman near the town of Van and opened up this new area in East Texas. On the heels of blocking and checkerboarding follows wildcat locations or core drill tests, and although several tentative locations have been announced nothing has definitely developed in many parts of the district.

It was announced that complete ratification of the unit development plan for the Van field was made this week when all the companies had agreed that unit operation would be of the greatest benefit to all involved, the royalty owners and fee owners as well as the companies holding leases to the acreage specified in the plans.

One small tract, approximately 6.2 acres lying about 4,000 feet southeast of the Pure Oil Co.'s discovery well, between the Pure and The Texas Company's acreage, seemed to be a "fly in the ointment" of the development plan, but it is understood that the lease owner, Fred Prince, had sold it to one of the companies at a reported price of around $1,000 an acre with a small overriding interest.

The unit development plan names the Pure Oil Co. to do the drilling of the block, the other companies owning offset acreage to receive their allotment of production according to amount of acreage each holds and the depth from which production comes. Due to the Pure company having a 10-inch outlet to the pool it will no doubt market all the production for the companies in the pool, at least for the present.

One other possible stumbling block in the way of the plan is a town lot in the town of Van, about 40 feet by 140 feet, to which the Pure Oil Co. claims title, but which was purchased by L. B. Pruett of Dallas. It seems that the Railroad Commission has agreed to grant a permit for drilling a well on the lot if title is established; the Pure Oil Co. has obtained an injunction against Mr. Pruett and the latter's lawyers are attempting to get a hearing on the injunction as soon as possible.

The Pure Oil Co.'s No. 1 Thompson, south offset to the discovery well, is drilling at 2,410 feet in hard shale and chalk; Shell Petroleum Corp.'s No. 1 Tunnell, east offset to the discovery, is drilling at 2,335 feet in broken chalk, and its No. 2 Tunnell is drilling at 1,710 feet in sticky shale. All are being drilled with rotary by the Pure Oil Co.

The East Texas Oil Corp.'s No. 1 Kadane, formerly Kimbrough and other's No. 1 Kadane, in the NW corner of the John McFadden Survey, on the western edge of Smith County, is now shut down at 720 feet waiting on fuel. This wildcat is the nearest to the discovery well near Van, and will prove an extension to the east of the pool if it comes in a commercial producer. If it is a dry hole it will establish the eastern limits to the pool. Consequently it is an interesting test and will be closely watched from about 2,200 feet down.

The Nimrod Oil Co. of Dallas is blocking about 3,500 acres centering around the Thomas Horsley Survey in Van Zandt County, and has a drilling contract which calls for spudding a test within 90 days after clearing of titles.

It is also reported that W. T. Daniels and others have blocked about 1,000 acres around the John Wright Survey, 2 miles NE of Fruitvale in Van Zandt County, and have made a tentative location near the south center of Mrs. F. Cumbine's 200-acre tract. The well is to be started by January 1 and go to 3,500 feet.

The Humble Oil & Refining Co. is drilling at 800 feet in sandy shale in its No. 1 core test on the C. E. Druell farm in the C. E. Rivers Survey, Van Zandt County.

Across the line in Smith County the Deep Rock Oil Co. has announced a location in the Freeman 166-acre tract, in the Martin V. Loot Survey.

The Mid-Kansas Oil & Gas Co. is taking leases in the extreme NE part of Cherokee County around the Sinclair Oil & Gas Co.'s block, and is to make a core test profile across Cherokee County and into Rusk County on the northeast.

Roeser & Pendleton are moving in material on their test in the W. L. Moody 200-acre tract in the James Walsh Survey, 7 miles due east of Bethel in Anderson County.

The Shell Petroleum Corp. has quit its No. 1 Coleman core test in Henderson County, at 2,174 feet in shale. This company has torsion-balance crews working north of Athens around Eustace in Henderson County and the Southern Crude Oil Purchasing Co. has torsion-balance crews on its Overton Block in the western part of Rusk County.

Pure Oil Co.'s No. 1 Jarman, the discovery well, is averaging 265 bbls. daily.

Production

Daily average production during the past week follows:

Boggy Creek	3,250
Cedar Creek	71
Currie	380
Hill County	46
Mexia	4,892
Minerva	600
Nigger Creek	220
Powell	6,729
Richland	260
Thrall	37
Van	260
Wortham	930
Total	17,674
Week ending November 16	17,859
Decrease	185

Freestone County

In Freestone County, Haley & Young's wildcat No. 1 Knight, near Luna, is standing with 1,850 feet of fluid in the hole after bailing. The fluid is showing oil from sand and shale at 4,806 feet. C. F. Lytle's No. 2 Thompson, deep test at Mexia, Limestone County, also is standing after bailing to test a sandy lime showing oil at 4,320-40 feet. This test was bailed dry but after standing three days a small amount of oil came in the hole. It now is standing for more oil to come in.

Boggy Creek

On the Boggy Creek Dome on the Anderson and Cherokee County line, Humble Oil & Refining Co.'s No. 3-B Elliott & Clark has picked up a sand showing oil at 3,606 feet and has cemented 6⅝-inch casing to test. Humble's No. 3-A Jones, Boggy Creek, is drilling hard shale and lime at 3,042 feet; No. 3 Tom Jones, Jr., is drilling chalk at 2,786 feet; No. 1-B Todd is drilling shale at 1,566 feet; No. 2 Gauger is drilling hard shale at 3,327 feet.

Humble's No. 1 Birdwell, on the Posey saline, Anderson County, is drilling hard shale at 2,898 feet.

In Robertson County, Killiam & Phillips' No. 1 Scramalde is drilling below 250 feet. Magnolia Petroleum Co.'s No. 1 Duran, Loller Survey, Rusk County, is drilling lime at 3,852 feet. C. M. Joiner's No. 2 Bradford, Rusk County, has resumed operations after being shut down since early in August. It now is drilling in shale at 1,490 feet.

Gruver and associates' No. 1 Westbrook, Falls County wildcat, still is waiting packer to test the Buda lime at 927 feet. It had a showing at that depth to where it was plugged after testing salt water in the Edwards at 1,270 feet.

Haskell and associates' No. 1 Strange at Currie, Limestone County, is shut down at 2,832 feet. Jensen & Baggett's No. 1 F. R. Richardson, Limestone County, is rigging up. Why Not Oil Co.'s No. 3 Rhea, Mexia, Limestone County, is drilling at 162 feet.

In Navarro County, Haskell & Brooks' No. 1 Morrow is in a sand showing oil at 3,205-06 feet and has cemented 6⅝-inch casing at 3,197 feet preparatory to testing. O'Byrne and associate's No. 1 Bush, Navarro County, is drilling shale at 2,208 feet.

Burnham and associates have started up on their No. 1 Norton, in Angelina County. This is one of several shallow tests to be drilled by these operators in that county, which for several months has been inactive. Shallow production has been obtained in that area before which pays off in small pumpers.

REFINERS DISCUSS FUEL OIL CONTRACTS

(Continued from Page 36)

have been closed, the negotiations under way point to a return to the old basis of 60 per cent of the posted price for 36 gravity crude. The posted price of this grade at present is $1.45 so that 60 per cent would mean a base price of 87 cents. One suggested contract would provide a base price of 85 cents at this time to move up or down with 60 per cent of the price change for 36° gravity crude oil as posted at the wells by the major buyers. A minimum price of 75 cents and a maximum of $1.20 is suggested. The terms of this contract would of course vary somewhat dependent on the location of the refineries and their nearness to the railroad buyer.

This contract compares with a base price of 70 cents in 1929 in several agreements between refiners and railroads. The contracts of the past year in most cases netted the refiners less than 60 per cent of the crude oil price although higher than the average spot price.

It is not believed the new contract will work any hardship on the railroads. The only competitor of fuel oil in this class of business is coal and it is agreed fuel oil must pass the $1.25 per barrel mark before coal becomes attractive as a substitute.

Crude Oil Prices

From the refiners' angle, it is predicted the contract price would be in line with the probable spot market. With the crude oil production in the Mid-Continent successfully curtailed so that an equilibrium has been secured between supply and demand it is felt crude oil prices will not go below their present levels. If this plan is carried out it is certain the fuel oil market will continue to strengthen in the Mid-Continent as there is a heavy demand for all grades by industrial and public utility consumers.

Due to the expansion in cracking facilities several refiners in Oklahoma will have substantially less fuel oil to sell next year. At least one refiner will not renew his contract due to the fact he expects to operate his cracking units on a non-residuum operation so he will not have any fuel oil except that needed for plant fuel. This reflects a general trend in refinery operation which has been brought about in part, due to the fact that fuel oil prices have been too low and refinery operators were forced to operate with the view of securing the maximum yield of gasoline and the minimum yield of fuel oil.

Refinery Location

There is still another phase to the relationship between Mid-Continent refiners and southwestern railroads which merits consideration at this time. Developments of the past year have emphasized the trend toward the location of refineries either at coastal points or in the Great Lakes area of the Middle West. While the Mid-Continent, outside of West Texas, has practically stood still so far as refinery expansion is concerned during the past year there have been substantial increases in capacities in the other areas mentioned which are connected by pipe line to the Mid-Continent fields.

This trend is due to the economies effected by the location of refineries within the consuming areas or adjacent to points where cheap water transportation is available. It is known at least two companies which have refineries located in the Mid-Continent are now consider-

ing the construction of new plants in the Gulf Coast and Middle West.

Due to this condition it is felt that Southwestern railroads in the present situation have more at stake than the securing of cheap supply of fuel. The 120 refineries now operating in the Mid-Continent Field furnish a substantial part of the business to these railroads and the prices paid for fuel oil over the next few years will play an important part in determining whether their operation is important.

Gasoline and Naphtha

The continued weakness in U. S. Motor gasoline is a disappointment to the refiners who had expected that the export buying which came into the market late in October for delivery over the remainder of the year would take up the slack in the motor fuel market and improve prices generally. The selling at low prices is coming from both large and small refiners. Some accumulated more gasoline in the early fall than they needed and they are now taking the low of the market in preventing further accumulations.

Where large orders are available the competition is keen. One large order for December delivery was placed on a basis of 6 cents Group 3. Brokers who bought from refiners early in the month were offering the U. S. Motor gasoline for immediate delivery at 6½ and 6⅝ cents.

The higher gravities are in better shape. The 60-62 400 grade was firm at a low of 7¼ cents with sales reported as high as 7⅝ cents. Sales of the 64-66 390 grade were being made at 7⅝ and 7¾ cents and 64-66 375 at 7¾ to 8 cents. The low on 360 and 350 endpoint was 8 cents with sales up to 8⅜ cents.

Naphtha prices are lower although the demand is steady. Blending naphthas are available for interstate shipment as low as 6½ cents in Oklahoma. The better grades are selling at 6¾ to 7¼ cents.

Kerosene and Distillate

Kerosene is decidely a drug on the market. An occasional sale is reported under the general market coming from a refiner whose storage is full and who requires immediate relief. A price of 4⅜ to 4¾ cents was the general market for the 41-43 water white grade. A few sales were made under this price.

Due to the excess supplies there are not the usual price differentials between the ordinary and high gravity grades. Sales of 42-44 gravity at 4½ and 4⅝ cents were reported.

The improvement in the distillate demand last week appeared to have slowed up the first of this week. Prices are unchanged.

Fuel Oil and Gas Oil

Spot prices on the several grades of fuel oil were advanced during the past week when many changes were made. The only weakness apparent is in the high cold test grades. The quantity of this material being offered is small and it is not a factor in the general market.

Sellers reported many inquiries for all gravities. The industrial buying is holding up much better than was predicted and in the high gravity furnace oil grades are practically unobtainable on the spot market. Sales of the 28-30 low cold test at $1.15 and $1.20 were reported and the 30-32 grade at $1.25. Gravities under 20 found many buyers at a low of 65 cents. Gas oil prices are unchanged.

Lubricants and Wax

One of the largest Oklahoma manufacturers of neutral oils is preparing to advance prices on several grades. At least two smaller manufacturers have already advanced their prices. Bright stock prices are firm with no changes reported in steam refined stocks. Wax prices are nominal at a price range of 3 to 3⅛ cents.

EARNINGS AND DIVIDENDS SHOWS PROFITABLE YEAR

(Continued from Page 145)

companies, affected by the cessation of deliveries of Mid-Continent crude oil to the eastern seaboard by pipe line in favor of tanker shipments, have accommodated themselves to the contraction in their traffic with reduced capital. Last year and this some of these companies returned to stockholders funds no longer needed in their restricted business. National Transit Co. is taking crude shipped by tanker to the Atlantic Coast and piping it to Pittsburgh and Franklin, Pa., refinery districts, a reversal of its former movement.

South Penn Oil Co., foremost purchaser and producer of Pennsylvania-grade crude, paid a 50 per cent stock dividend in January this year, and thereafter 50 cents each in three quarters. Thus far dividends for the year have totaled $1.50, equal to $2.25 on the capital prior to the stock dividend, and comparing with $2.50 paid in 1928. Penn Mex Fuel, its controlled company, has authorized $2 for the year, the same as last year.

Solar Refining Co., which operates a complete refinery at Lima, Ohio, voted a four-to-one split-up in January and placed the new stock on $2.50 annual basis, the equivalent of the $10 paid on the old stock. Although one of the smaller units of the old Standard Oil Co., with capital of 120,000 shares of $25 par value and the highly valuable "Vaseline" trademark, Chesebrough Manufacturing Co. has made liberal distributions to stockholders. The dividends for the first three quarters amounted to $4.50 with every indication that the usual extra of 50 cents in addition to the regular quarterly distribution of $1 will be declared at the meeting of directors this week. On this assumption, the total disbursements for the year will be $6 a share, the same as in 1928.

Due to the low prices for petroleum products caused by overproduction and the competition of Russian oil, Anglo-American Oil Co., the most important distributor in United Kingdom, deferred action on the interim dividend for 1928, but in June this year paid a final dividend of 7½ per cent on the £1 par ordinary shares, equivalent to 1s 6d. This was equal to 36¾ cents a share at the ruling rate of exchange at that time.

Signal Oil

The Signal Oil & Gas Co. November 19, declared an extra stock dividend of 2 per cent in addition to the regular cash dividend of 43¾ cents.

Bolsa Chica Oil

The Bolsa Chica Oil Corp., Los Angeles, voted its regular quarterly dividend of 2 per cent on the "A" stock. It will be paid December 15 to stockholders of record on November 30.

Standard of New Jersey

Balance sheet of Standard Oil Co. of New Jersey as of December 31, 1928, showed funded debt totaling $167,197,000, of which $120,000,000 was the company's own 20-year 5 per cent debentures, due December 15, 1946, $22,775,000 Humble Oil & Refining Co. 10-year 5½ per cent debentures, due July 15, 1932, and $24,422,000 Humble Oil 10-year 5 per cent debentures, due April 1, 1937. The amount of the company's own debentures has shown no change, but Humble Oil 5½ per cent debentures now total $22,082,000, a reduction of $693,000 from the end of last year, and Humble Oil 5 per cent debentures total $20,662,000, a reduction of $3,760,000.

Phillips Petroleum

"The material decline in production of crude oil during the last 30 days, due to voluntary proration in California and the Mid-Continent area, to current requirements will stablize the petroleum industry, conserve its resources and improve its earnings," said Frank Phillips, president of Phillips Petroleum Co., in an inteview with The Wall Street Journal. Continuing, Mr. Phillips said: "It is particularly significant that proration is voluntary, showing a whole-hearted cooperation and resulting in supply and demand being balanced for the first time in years.

"Another constructive factor is the unitization plan which is meeting with practically unanimous accord by both large and small companies. The American Petroleum Institute meeting at Chicago in December is expected to develop further constructive measures. It seems certain that the oil industry is rapidly reaching a better condition than at any time during recent years of over-production.

"Phillips Petroleum Co.'s earnings favorably reflect these improved conditions. Earnings for the third quarter were the best in two years. Earnings for October were the largest of any month in over two and one-half years. This would indicate the year's profit at over $21,000,000 after all charges except depletion and depreciation.

"Our retail marketing division, formed less than two years ago, now has well over 6,000 retail outlets. Natural gasoline production has steadily increased to over 750,000 gallons a day. The new product, known as Philgas (domestic fuel), a by-product of natural gasoline, is becoming an increasingly important factor in our earnings. Sales of dry gas and the manufacture of carbon black are increasing.

"The number of our stockholders has increased continually since incorporation in 1917. There has been a decided increase in the number during the past month. Dividends were inaugurated in 1921 and have been continuous since that time. In addition to regular dividends the company, in 1920, made a stock distribution of 100 per cent and another of 50 per cent along with $1 in cash extra in June, 1923. An extra cash dividend of 50 cents a share was declared in the last quarter of 1928. Valuable rights have been issued to stockholders from time to time during the past.

"Current position shows cash and other current assets equal to more than five times current liabilities, with no bank loans."

The directors of the Phillips Petroleum Co. this week increased the regular dividend to a $2 annual basis, exclusive of extra dividends, by declaring a cash dividend of 50 cents per share in lieu of the recent 37½ cents per share. In addition the directors declared a stock dividend of 5 per cent on the total outstanding stock. Both dividends are payable to stockholders of record December 16, 1929. Cash dividend payable on January 2, 1930, and the stock as soon as practical after December 16, but not before January 2.

Frank Phillips, president of the company, said if earnings continue as good or better than at present that, in addition to the regular quarterly cash dividends, he would recommend to the Board of Directors the payment of extra quarterly stock dividends. Continuing, Mr. Phillips said:

"The payment of the increased cash dividend and the stock dividend will leave a substantial sum to add to surplus, which was over $29,000,000 at the beginning of the year. Including the dividend just declared we will have paid our stockholders over $35,000,000 in cash in an unbroken record since dividends were inaugurated in 1921. In addition a 100 per cent stock distribution was made in 1920 and a 50 per cent stock distribution in 1923. Many valuable rights have also been given to stockholders from time to time. Reserves for depletion and depreciation, which have been deducted from earnings annually, will approximate $80,000,000 by the end of the year, which sum exceeds the common capital stock outstanding at the time of over $63,000,000, having been gradually built up to that amount from less than $2,000,000 at date of incorporation in 1917. The company's assets are in excellent condition with all divisions operating at a profit; substantial progress has been made in developing the company into a fully integrated position. The increased earnings indicate the soundness of such procedure. Notwithstanding the large capital expenditures that have been made during the year in order to further diversify our source of income, the company's current position as of November 1 reflected cash and other current assets of more than five times current liabilities, with no bank loans."

Statement of Earnings

An average increase in profit of 33 per cent has been computed for 24 oil producing and refining companies on the basis of their individual statements of earnings for the first nine months of this year, against the corresponding period last year, by Ernst & Ernst, accountants.

The table follows:

	Net Prof. Nine Mos. Ended Sept. 30	
	1929	1928
Amerada Corp. ..... $	713,299	$1,635,471
Am. Republics Corp ..	451,359	79,374
Atlantic Refining ..	13,687,000	11,908,987
Bandini Petroleum ...	1,505,680	*28,790
Barnsdall Corp	5,721,706	2,401,461
Beacon Oil	869,385	1,086,874
Houston Oil of Texas.	1,251,630	1,099,426
Independent Oil & Gas	5,097,502	2,138,974
Lion Oil Refining	1,039,822	178,547
Louisiana Oil Refining	1,526,887	1,137,138
Mid-Cont. Petroleum..	10,879,647	7,241,119
Occidental Petroleum.	708,817	85,716
Panhandle Prod. & R.	129,874	*76,826
Phillips Petroleum	15,029,588	12,366,133
Pierce Petroleum	878,718	791,683
Richfield Oil of Calif. .	6,472,340	5,455,193
Shell Union Oil	18,682,405	15,433,352
Simms Petroleum	1,306,634	59,250
Skelly Oil	4,813,451	2,462,407
Texas Pac. C. & O. ..	1,472,457	1,272,939
Tide Water Asoc. Oil.	11,084,011	12,844,754
Transcontinental Oil ..	3,520,093	1,248,032
Union Oil of Calif	†12,000,000	†8,550,000
White Eagle O. & R. ..	1,636,350	1,209,257
Total	$120,478,655	90,580,461

*Deficit. †Estimated.

The figures for the Richfield Oil Co. of California include the Pan-American Western Petroleum Co. only in 1929, while those for Amerada Corp. do not include profits in 1928 from the sales of leaseholds amounting to approximately $1,900,000.

William N. Davis Re-elected to Head Mid-Continent Assn.

William N. Davis of Bartlesville, Okla., was re-elected president of the Mid-Continent Oil and Gas Association by the board of directors of the association on Tuesday. W. C. Franklin was elected vice president for Oklahoma and Kansas; J. D. Collett, for Texas; and F. Ray McGrew, for Arkansas and North Louisiana. Harry H. Smith was re-elected secretary-treasurer.

The board adopted a resolution to provide a budget of $25,000 for safety work in 1930.

W. N. Davis and Harry H. Smith were appointed a committee to represent the association at a hearing on an important tax matter at Washington.

The question of adopting uniform holiday observances was discussed and the secretary was instructed to canvass members as to their wishes in the matter.

The directors discussed the question of the adoption of an assignable division order used in the purchase of crude oil at the well and referred the matter to the legal committee.

WAREHOUSE PURCHASED

CHICAGO, Nov. 22.—The Cities Service Oil Co. has purchased the warehouse of the Apex Motor Fuel Co. at 3200 S. Western Ave., this city. The plant was purchased by the Apex Motor Fuel Co. from the Indian Refining Co. about three years ago. The plant is especially desirable for its new owners as it has docks on the south branch of the Chicago River and the refinery products from the new plant at East Chicago, Ind., can be delivered by barges direct to this plant.

The Apex Motor Fuel Co. has two other bulk plants and may at an early date build a third better planned for its use than was that just sold to the Cities Service company. For a while the Mid-Continent Petroleum Corp. made some use of the facilities of this warehouse as a barrelling plant.

ELECTRIC POWER FOR DRILLERS

CHATHAM, Ontario, Nov. 23.—Calgary Power Co. is extending its hydro power line from High River to South Turner Valley, and will later continue the line through Turner Valley to Black Diamond. The company is planning to supply power for drilling rigs and machine shop and other oil field requirements.

PREPARATIONS COMPLETED FOR BIG CONVENTION

(Continued from Page 39)

held throughout the country during the past year. Discussion led by California district: H. N. Marsh, General Petroleum Corp.; Texas-Louisiana-Arkansas: W. C. Thomas, Vacuum Oil Co.; Eastern: J. French Robinson, Peoples Natural Gas Co.; Mid-Continent: W. K. Whiteford, Barnsdall Oil Co., and special discussion, John T. Haywood.

North Ballroom

REFINERY TECHNOLOGY—MOTOR FUEL:

"Vapor Pressure on Gas Free Gasolines," O. C. Bridgeman, United States Bureau of Standards.

"Fuel Volatility and Engine Acceleration," D. S. Brooks and C. S. Bruce, United States Bureau of Standards.

"Standardization of Antiknock Testing," H. L. Horning, Waukesha Motor Co.

"Gas-Locking Tendencies of Aviation Gasolines in Airplane, Fuel Lines and Feed Pumps," C. C. Moore, Jr., and M. S. Reynolds, Union Oil Co. of California.

West Ballroom

AUTOMOTIVE TRANSPORTATION:

"A Basis for Retirement of Automotive Equipment," J. C. Bennett, Associated Oil Co.

"Design of Six-Wheel Trucks and Their Relation to Highway Problems," C. A. Pierce, Diamond T Motor Car Co.

"Application of Semi-Trailers to Petroleum Industry Transportation," A. W. Kenerson, Standard Oil Co. (Ohio).

"Motor Vehicle Records and Their Application," J. G. Moxey, Atlantic Refining Co.

WEDNESDAY, DECEMBER 4

Afternoon Group Meetings, 2 P. M.—South Ballroom

PRODUCTION PRACTICE:

SYMPOSIUM ON AIR AND GAS INJECTION:

H. C. Miller, United States Bureau of Mines, will present a summary of past and present practice on this subject, based on a questionnaire survey of the United States made by the Committee on Production Practice, E. O. Bennett, Chairman. Discussion led by: Mid-Continent district: D. L. Trax, Gypsy Oil Co.; T. A. Hall, Tidal Oil Co.; R. M. Carr, Sinclair Oil & Gas Co.; Texas-Louisiana-Arkansas: W. W. Scott, Humble Oil & Refining Co.; Rocky Mountain: F. E. Wood, Midwest Refining Co.; California: A. C. Rubel, Union Oil Co.; and Eastern: O. C. Dunn, Smith & Dunn.

North Ballroom

REFINERY TECHNOLOGY—CRACKING:

"Some Developments in Commercial Cracking," H. L. Strout, Standard Oil Co. of California.

"Principles of Vapor Phase Cracking," R. C. Osterstrom and C. R. Wagner, The Pure Oil Co.

"A New Type of Cracking Unit," Luis deFlorez.

Grand Ballroom

MARKETING PROBLEMS:

"Marketing Economics and Management," Dr. Fred E. Clark, Professor of Marketing, School of Commerce, Northwestern University.

"Defining and Enforcing Trade Practice Codes," M. Markham Flannery, Director Trade Practice Conference, Federal Trade Commission.

"Petroleum and the Commercial Survey of the Gulf Southwest," C. B. Eliot, United States Department of Commerce.

WEDNESDAY, DECEMBER 4

Evening Group Meetings, 8 P. M.—North Ballroom

CORROSION OF EQUIPMENT:

Report of Committee on Refinery and Marine Corrosion. Walter Samans, The Atlantic Refining Co.

"Aluminum and Its Alloys as Corrosion Resistant Materials in the Oil Industry," Stanley Gill, Gulf Pipe Line Company.

"Pressure Still Corrosion," J. K. Roberts and W. G. Whiteman, Standard Oil Co. (Indiana).

"Practical Methods of Combating Corrosion in Oil Refining Equipment," R. L. Duff, Standard Oil Development Co.

"Cause of Corrosion in Cracking Plants," E. Retailliau and F. R. Lang, Shell Petroleum Corp.

South Ballroom

TAXATION:

"The Increasing Cost of Government," F. E. Packard, Standard Oil Co. (Indiana).

"The Motor Fuel Tax and Its Future," Hubert B. Fuller.

"The Retailers' Tax Problems and How to Meet Them," L. W. Marshall, The Pure Oil Co.

"The Tax Problem of the Producer and Refiner," Mark O. Danford, Midwest Refining Co.

THURSDAY, DECEMBER 5

Morning Group Meetings, 10 A. M.—South Ballroom

PRODUCTION PROBLEMS:

"Power Correlation of Drilling Equipment," J. R. Gignoux, Shell Oil Co.

"Metallurgy of Drilling Equipment," H. W. Fletcher, Chairman of National Committee on Metallurgy.

"Fundamental Research Project No. 25: Determination of Geothermal Gradients in Oil Fields on Anticlinal Structure," K. C. Heald, The Gulf Companies.

North Ballroom

REFINERY TECHNOLOGY:

"Some Properties of Mid-Continent Crude," Ogden Fitzsimmons and W. H. Bahlke, Standard Oil Co. (Indiana).

"Studies of Distillation, Rectification of Heavy Naphtha," W. K. Lewis and E. R. Smoley, Massachusetts Institute of Technology.

"Application of Thermodynamics to Chemical Reactions of Petroleum Products," A. W. Francis and R. N. Kleinschmidt, A. D. Little, Inc.

"Dewaxing of Lubricating Oils," E. R. Lederer and R. Beattie, Texas Pacific Coal & Oil Co.

"Manufacture of Bright Stock by Contact Filtration," R. D. Evans. Independent Oil & Gas Co.

Grand Ballroom

NATIONAL CODE OF PRACTICES FOR MARKETING REFINED PETROLEUM PRODUCTS:

Note: This is an open and public joint session of the members of the National Committee on Interpretation of the Code, the six Regional Code Committees and the State and other Code Sub-Committees, which meeting all oil men engaged or interested in marketing refined petroleum products are invited to attend and to participate in the discussion.

The session will be devoted to: Obtaining reports of the progress made by the various committees in obtaining the signed acceptances of the Code by refining and marketing companies. Ascertaining how generally and effectively the companies are putting the Code into actual practice. Discussing the rules of the Code and the interpretations thereof.

THURSDAY, DECEMBER 5

Afternoon Group Meetings, 2 P. M.—South Ballroom

BUSINESS SESSION OF THE DIVISION OF DEVELOPMENT AND PRODUCTION ENGINEERING:

"Report of 1929 Activities," John R. Suman, General Chairman.

"Report of Committee on Drilling Practice," R. E. Collom, Chairman.

"Report of Committee on Production Practice," E. O. Bennett, Chairman.

Report of Nominating Committee and Election of Officers for 1930.

Open Forum: General Discussion of Progress and Suggestions for Conduct of Divisional Activities During 1930.

North Ballroom

REFINERY TECHNOLOGY—GUM:

"Stabilization of Knock Rating, Gums and Color of Gasoline by Chemical Inhibitors," G. Egloff, W. F. Faragher and J. C. Morrell, Universal Oil Products Company.

"Factors Affecting Determination of Gum in Gasoline," C. R. Wagner and Julius Hyman, The Pure Oil Company.

"Some Phenomena of Oxygen Absorption Gum Determination of Motor Fuels," E. C. Herthel and Frank Apgar, Sinclair Refining Co.

West Ballroom

CORROSION OF EQUIPMENT:

Report of Committee on Production and Pipe Line Corrosion. E. P. Bly, Standard Oil Co. of California.

Report on Bureau of Standard Soils Corrosion Investigation. K. H. Logan, United States Bureau of Standards.

"Pipe Line Currents," K. H. Logan, United States Bureau of Standards; Walter Rogers, Gulf Pipe Line Co., and J. F. Putnam, Standard Oil Co. of California.

"Corrosion and Pipe Line Coverings," Charles Fitzgerald, Pure Oil Pipe Line Company of Texas.

"The Field Inspection of Protective Coatings for Oil and Gas Lines," Gordon N. Scott, A. P. I. Research Associate at the U. S. Bureau of Standards.

THURSDAY, DECEMBER 5

Evening Annual Dinner, 8 P. M.—Grand Ballroom

"Prophets and Profits," Capt. Irving O'Hay, United States Army (retired).

COMMITTEE MEETINGS

SATURDAY, NOVEMBER 30, 1929

Morning—Room 430-A

10:00 A. M. Sub-Committee (Group 1) on Uniform Tank Measurements and Gauge Tables. Chairman: C. A. Young. Secretary: Ray F. Shumaker.

Private Dining Room No. 4

10:00 A. M. Oil Pollution—Technical Committee on Prevention of Pollution. Chairman: D. V. Stroop.

MONDAY, DECEMBER 2, 1929

Morning—Room 435-A

9:00 A. M. Manufacturers Sub-Committee on Belting. Chairman: Z. F. Harshton.

Room 440-A

9:00 A. M. Belting Engineering Sub-Committee. Chairman: D. L. Trax.

Room 422-A

9:30 A. M. Committee on Standardization of Steel Storage Tanks. Chairman: Ralph J. Reed. Secretary: Mark W. Daw.

Room 430-A

9:30 A. M. Committee on Standardization of Rigs and Derricks. Chairman: W. W. Fondren. Secretary: R. G. Hamaker.

Room 444-A

9:30 A. M. Committee on Standardization of Pumping Equipment and Engines. Chairman: T. E. Swigart. Secretary: H. N. Marsh.

Room 445-A

9:30 A. M. Committee on Standardization of Rotary Equipment. Chairman: E. J. Nicklos. Secretary: F. E. Bernsen.

Room 450-A

9:30 A. M. Committee on Standardization of Oil Field Boilers. Chairman: S. J. Dickey. Secretary: L. W. Voorhees.

Room 451-A

9:30 A. M. Committee on Standardization of Rig Irons. Chairman: H. J. Lockhart. Secretary: O. H. Attridge.

Room 452-A

9:30 A. M. Committee on Standardization of Cable Tool Joints. Chairman: E. H. Williams. Secretary: C. T. Mapes.

Room 439-A

10:00 A. M. Manila Cordage Section: Committee on Standardization of Wire Rope and Manila Cordage. Chairman: C. C. Scharpenberg. Vice Chairman, Cordage Section: J. S. McDaniel. Secretary: D. E. Dickey.

West Ballroom

10:00 A. M. General Committee on Railroad Transportation. Chairman: Fayette B. Dow. Secretary: D. V. Stroop.

North Assembly Room

10:00 A. M. Committee D-2 (A.S.T.M.) on Petroleum Products and Lubricants. Chairman: F. A. Hull. Secretary: R. P. Anderson.

Private Dining Room No. 6

10:00 A. M. Committee on Production and Pipe Line Corrosion. Chairman: E. P. Bly.

Private Dining Room No. 7

10:00 A. M. Committee on Refinery and Marine Corrosion.

10:00 A. M. Sub-Committee on Accounting (Group 4) of the General Committee on Measuring, Sampling and Testing of Crude Oil. Room 412. Chairman: M. W. Mattison.

Private Dining Room No. 3

10:30 A. M. Advisory Committee on Statistics. Chairman: John D. Gill. Secretary: Fred Van Covern.

Room 440-A

10:30 A. M. Committee on Standardization of Belting. Chairman: A. H. Riney. Secretary, L. B. Holland.

Afternoon—Room 440-A

1:30 P. M. Belting Engineering Sub-Committee and Manufacturers Representatives. Chairman: D. L. Trax.

West Ballroom

2:00 P. M. General Committee on Fire Prevention. Chairman: R. P. Anderson. Secretary: D. V. Stroop.

North Assembly Room

2:00 P. M. Sub-Committee on Testing Methods and Specifications. Chairman: R. P. Anderson.

Room 439-A

2:00 P. M. Wire Rope Section: Committee on Standardization of Wire Rope and Manila Cordage. Chairman: C. C. Scharpenberg. Vice Chairman: Wire Rope Section: H. J. Leschen. Secretary: D. E. Dickey.

Room 423-A

2:00 P. M. Committee on Standardization of Oil Country Tubular Goods. Chairman: Charles Fitzgerald. Secretary: E. P. Bly.

Private Dining Room No. 5

2:30 P. M. Advisory Committee on Public Relations. Chairman: Northrop Clarey.

Room 440-A

3:00 P. M. Committee on Standardization of Belting. Chairman: A. H. Riney. Secretary: L. B. Holland.

North Assembly Room

3:30 P. M. General Committee on Refinery Technology. Chairman: E. W. Isom. Secretary: R. P. Anderson.

Evening—North Assembly Room

8:00 P. M. General Committee on Automotive Transportation. Chairman: R. P. Anderson. Secretary: D. V. Stroop.

Private Dining Room No. 4

8:00 P. M. General Committee on Oil Pollution. Chairman: Robert F. Hand. Secretary: D. V. Stroop.

Afternoon—South Ballroom

8:00 P. M. General Committee on Corrosion. (Conference with manufacturers of bituminous coatings. Manufacturers are invited to attend.) Presiding: E. P. Bly.

TUESDAY, DECEMBER 3, 1929

Morning—Room 453-A

9:00 A. M. Correlating Committee on Gauges and Gauging Practice. Chairman: H. W. Fletcher. Secretary: C. A. Young.

Private Dining Room No. 4.

9:00 A. M. General Committee on Corrosion. Chairman: R. P. Anderson. Secretary: D. V. Stroop.

Room 412

10:00 A. M. General Committee on Uniform Methods of Oil Accounting. Chairman: M. W. Mattison. Secretary: J. A. McNally.

Evening—Room 423-A

8:00 P. M. General Committee on Standardization. Chairman: J. Edgar Pew. Secretary: C. A. Young.

WEDNESDAY, DECEMBER 4, 1929

Morning—North Assembly Room

9:00 A. M. Committee on Standardized Procedure for Measuring, Sampling and Testing of Crude Oil. Chairman: W. S. Farish. Secretary: C. A. Young.

Evening—Room 423-A

8:00 P. M. General Committee Division of Development and Production Engineering. Chairman: John R. Suman. Secretary: C. A. Young.

OTHER COMMITTEE MEETINGS

The following committees will meet at the time and place indicated to the members by the respective Chairmen:

National Committee on Interpretation of The Code. Chairman: H. T. Klein.

Committee on Railway Equipment. Chairman: D. V. Stroop.

Special Committee on Gauging Tank Cars. Chairman: D. V. Stroop.

Steel Derrick Manufacturers' Sub-Committee. Chairman: H. M. Runkle. Secretary: J. D. McEwen.

Pumping Equipment Sub-Committee on Working Barrel Gauges. Chairman: H. N. Marsh.

Central Petroleum Committee, National Research Council. Chairman: Hugh S. Taylor.

A. P. I. Advisory Committee on Fundamental Research. Chairman: R. P. Anderson.

Late Fields

(Continued from Page 48)

ment that a considerable amount of gas has been encountered at a depth of 4,776 feet in the Michigan Petroleum Co.'s No. 1 C. E. Moe, SE SE Section 6-9n-13w, Chester Township, Ottawa County. This well is about 20 miles southeast of the Muskegon Field and 2 miles east of the village of Ravenna and just east of the Muskegon-Ottawa County line. The gas is coming from the Cincinnati series between the Niagara, or Guelph, and the Trenton limestone.

The well is shut down but drilling to the Trenton limestone believed to lie between 200 and 500 feet below the present depth will be resumed Monday, December 2. The present flow is estimated by George T. Bench, geologist for the company, at 100,000 to 250,000 feet a day with a rock pressure of about 2,000 pounds to the square inch. When lighted the well shot flames nearly as high as the 82-foot derrick.

At 4,776 feet the well is one of the deepest in the State and one of three deep tests in Ottawa County. It is 235 feet in the Cincinnati shales but above the Utica shale, through which it must be drilled before reaching the Trenton limestone, a big producer in Ohio, Indiana and Illinois fields.

John Linck is president and Howard L. Foster of Detroit secretary-treasurer of the operating company, which has previously drilled three wells on the eastern side of Michigan.

The best well completed recently in the Muskegon Field was brought in Monday with an initial flow estimated at 500 bbls. of oil and 2,000,000 feet of gas. The new well is Witt and Wyant's No. 7 Alfred H. Fenner, NW SE Section 11-10-17, Laketon Township, near the west limits of the field. Gas was struck at 2,052 feet and oil at 2,095 to 2,061 feet in the Dundee sands.

OKLAHOMA

Mid-Kansas Oil & Gas Co.'s No. 1 Mollman, SE cor., Section 23-11-3w, blew in Tuesday, November 26, and made 100 bbls. the first hour, and 95 bbls. the second hour. This well extends the producing area in the Oklahoma City Pool one-half mile to the west and practically proves every location in Section 24-11-3w. The well is producing from a total depth of 6,400 feet in sand. The first hour's production was made from 11:20 a.m., to 12:20 p.m.

Hall & Briscoe and others' No. 1 Childs, SE cor., Section 14-11-3w, has been changed from a "B" well to an "A" well, the change is effective as of November 24. The well produced 7,242 bbls. November 24; 7,119 bbls., November 25, and 6,965 bbls., November 26.

Skelly Oil Co.'s No. 1 Hoopes, NW cor. NE, Section 31-11-2w, cored from 6,325-28 feet, in sandy lime, nothing showing, and is now coring at 6,330 feet, on November 26.

Indian Territory Illuminating Oil Co.'s No. 2 Thomas Fuzzell, SE cor., Section 13-11-3w, was drilling plugs at 6,382 feet, it is one location east of the largest producer yet completed in the Oklahoma City Pool, which made 42,500 bbls.

Prairie Oil & Gas Co. and others' No. 1 Sudik, C NE NE, Section 8-10-2w, Cleveland County, was drilling at 7,485 feet, November 26. It is the deepest drilling test in the area surrounding the Oklahoma City Field.

The production of the Oklahoma City Pool on November 26 was 58,314 bbls. from the "A" wells. The previous day's gauge was 62,570 bbls. The Tom Slick Oil Co.'s No. 1 Glidden, SW cor. SE, Section 13-11-3w, is showing 27 per cent water on the gauge of November 26, when the total gauge was 6,715 bbls. The gauges by companies on November 26 was as follows:

Company, farm—	Bbls.
Cromwell, Trosper	2,867
Hall & Briscoe, Childs	6,965
I.T.I.O., No. 1 B. Anderson	4,293
I.T.I.O., No. 1 Fuzzell	15,739
I.T.I.O., Henning	2,143
I.T.I.O., Johnson	2,646
I.T.I.O., No. 1 E. Joyce	675
I.T.I.O., fee	1,533
I.T.I.O., No. 1 Trosper	871
I.T.I.O., No. 2 Trosper	4,116
Mid-Kansas, No. 2 Fortson	1,478
Prairie, No. 1 Hiddleston	4,730
Sinclair, Kinter	310
Sinclair, No. 1 Stamper	980
Sinclair, No. 2 Stamper	405
Slick, No. 1 Glidden	6,715
Slick, No. 2 Glidden	1,848
Total	58,314

The second largest well completed to date in the Oklahoma City Pool, was the Indian Territory Illuminating Oil Co.'s No. 2 Trosper, SW cor., Section 13-11-3w, which gauged 19,722 bbls. the first 24 hours from a total depth of 6,392 feet.

Transcontinental Oil Co.'s No. 2 Dawes, SW cor. SE Section 4-18-5, Payne County, which extends the field one location, has Wilcox sand at 3,618-29 feet. It flowed 185 bbls. the first 24 hours.

O. L. SOULES FATALLY HURT

WICHITA FALLS, Tex., Nov. 23.—Oscar L. Soules, 64, oil operator and a resident of Burkburnett, since the early days of the oil rush, was fatally injured when the light truck he was driving overturned west of Burkburnett.

N.P.A. Committees' Personnel for 1930 Announced by Lyons

The organization of the department personnel of the National Petroleum Association was completed at a meeting of the board of trustees held at Pittsburgh last week.

Following is the personnel of the departments as announced by E. M. Lyons, president:

1. Economics, accounting and statistics: T. J. Hilliard, trustee in charge. Councillors: M. A. Brewster, The Pennzoil Co., Oil City, Pa.; S. J. Brill, Kendall Refinging Co., Bradford, Pa.; Clarence J. Fox, Emlenton Refining Co., Emlenton, Pa.; H. A. Gidney, Gulf Refining Co., Pittsburgh, Pa.; J. E. Johnson, Waverly Oil Works Co., Pittsburgh, Pa.

2. Legislation and litigation: Sheldon Clark, trustee in charge. Councillors: Frank R. Coates, Crew Levick Co.-Empire Refineries, Care Henry L. Doherty & Co., New York City. N. Y.; M. F. Cowden, Pennsylvania Oil Products Refining Co., Warren, Pa.; William A. McAfee, Standard Oil Co. of Ohio, Cleveland, Ohio; Samuel Messer, James B. Berry Sons' Co. Inc., Oil City, Pa.; H. F. Stone, Gulf Refining Co., Pittsburgh, Pa.

3. Manufacture.

(a) Division of manufacturing: P. S. Tarbox, trustee in charge. Councillors: Earl E. Bown, Kendall Refining Co., Bradford, Pa.; D. W Hovey, Waverly Oil Works Co, Pittsburgh, Pa; Harry R Lewis, Conewango Refining Co., Warren, Pa.; F. J. McGraw, Oil Creek Refining Co., Titusville, Pa.; J. B. Northrop, Ohio Valley Refining Co., St. Marys, W. Va.

Bradford Group: Bradford Oil Refining Co.; Kendall Refining Co.; Pennsylvania Oil Products Refining Co. and Sinclair Refining Co.

Butler Group: W. H. Daugherty & Son Refining Co.; Pennsylvania Refining Co.; Tri-State Refining Co. and Valvoline Oil Co.

Oil City, Titusville, Franklin Group: American Oil Works Co.; Continental Refining Co.; Crew Levick Co.; Crystal Oil Works; Emlenton Refining Co.; Empire Oil Works; Franklin Creek Refining Corp.; Independent Refining Co.; Oil Creek Refining Co.; Penncrude Refining Co.; Pennzoil Co.

Pittsburgh Group: Canfield Oil Co.,; Freedom Oil Works Co.; A. D. Miller Sons' Co.; Waverly Oil Works Co.

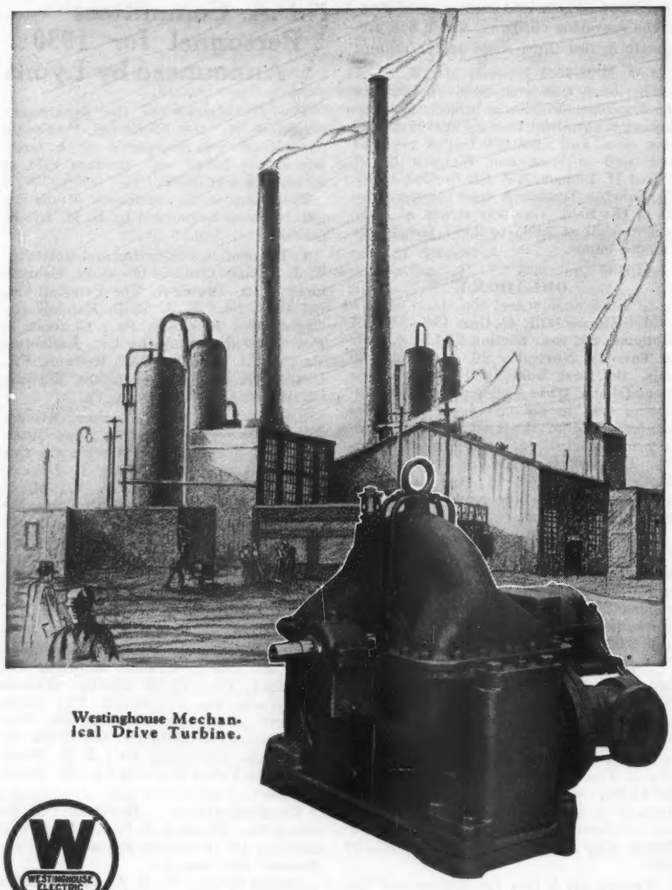
Warren Group: Conewango Refining Co.; Mutual Refining Co.; Levi Smith Refining Co.; Superior Oil Works; Swan-Finch Refining Co.; Tidioute Refining Co.; Tiona Refining Co.; United Refining Co.; Valvoline Oil Co.; Viking Oil Corp. and Warr-Penn Refining Co.

West Virginia Group: Ashland Refining Co.; Elk Refining Co.; Ohio Valley Refining Co.; Pure Oil Co.

(b) Division of scientific research. G. C. Davison, trustee in charge. Councillors G. D. Brandt, Crew Levick Co., care Henry L. Doherty & Co., New York City, N. Y.; J. S. Harrison, Standard Oil Co. of Ohio, Cleveland, Ohio; Dr. J. B. Rather, Standard Oil Co. of New York, New York City, N. Y.; C. R. Wagner, Pure Oil Co., Chicago, Ill.; W. S. Zehrung, The Pennzoil Co., Oil City, Pa.

4. Membership and relations. W. T. Holliday, trustee in charge. Councillors: John S. Cordell, Cities Service Refining Co., Boston, Mass.; O. D. Donnell, Central States Chairman, Ohio Oil Co., Findlay, Ohio; John P. Flynn, Ohio Valley Refining Co., St. Marys, W. Va.; H. A. Logan, Pennsylvania-West Virginia. Chairman, United Refining Co., Warren, Pa.; A. C. Woodman, Eastern Chairman, Richfield Oil Corp. of N. Y., New York City, N. Y.

5. Standards and tests: Earle M. Craig, trustee in charge. Councillors: F. W. Breth, Franklin Creek Refining Co., Franklin, Pa.; MacLean Houston, United Refining Co., Warren, Pa.; E. M. Keely, Crew Levick Co., Philadelphia, Pa.; R. C. Osterstrom, Pure Oil Co., Chicago,



Westinghouse Mechanical Drive Turbine.

Mechanical Drive Turbines

WESTINGHOUSE type "AMD" turbines offer many advantages for operating your refinery pumps.

The turbine is supported at the center line. This maintains alignment.

The glands are water sealed, consequently no packing to replace.

An emergency overspeed governor is included with every turbine.

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Ill.; Frank Philippbar, Kendall Refining Co., Bradford, Pa.

6 Trade and commerce: N. H. Weber, trustee in charge.

East Coast Group: C. G. Sheffield, chairman, Standard Oil Co. of N. J., New York City, N. Y. Councillors: Axtell J. Byles, Tide Water Oil Co., New York City, N. Y.; J. M. Carnes, Sinclair Refining Co., New York City, N. Y.; Frederic Ewing, Standard Oil Co. of N. Y., New York City, N. Y.; Harry D. Frueauff, Cities Service Co., New York City, N. Y.; J. Howard Pew, Sun Oil Co., Philadelphia, Pa.

Pennsylvania-West Virginia Group: A. W. Scott, chairman, Empire Oil Works Co., Oil City, Pa.; Councillors: Paul Blazer, Ashland Refining Co., Ashland, Ky.; A. M. Keister, Ohio Valley Refining Co., St. Marys, W. Va.; James Lewis, Bradford Oil Refining Co., Bradford, Pa.; L. L. Long, Waverly Oil Works Co., Pittsburgh, Pa.; Harry W. Schmidt, United Refining Co., Warren, Pa.; A. B. Weingard, American Oil Works Co., Titusville, Pa.

Central States Group: General H. C. Smither, chairman, Indian Refining Co.; Lawrenceville, Ill.; Councillors: H. B. Carpenter, Ohio Oil Co., Findlay, Ohio; F. T. Cuthbert, Solar Refining Co., Lima, Ohio; U. deB. Daley, Shell Petroleum Corp., St. Louis, Mo. E. W. Edwards, Paragon Refining Co., Toledo, Ohio; W. E. Smith, Standard Oil Co. of Kentucky, Louisville, Ky.

7. Traffic and Transportation: Frank B. Fretter, trustee in charge.

East Coast Group: Councillors: L. H. Benner, Standard Oil Co. of N. Y., New York City, N. Y.; C. B. Ellis, Gulf Refining Co., Pittsburgh, Pa.; W. A. Hamel, Cities Service Refining Co., Boston, Mass.; J. M. O'Day, Sinclair Refining Co., New York City, N. Y.; R. W. Ostrander, Standard Oil Co. of N. J., New York City, N. Y.

Pennsylvania-West Virginia Group: Councillors: J. T. Brosnahan, Emlenton Refining Co., Emlenton, Pa.; D. E. Carrier, The Pennzoil Co., Oil City, Pa.; J. B. Fisher, Kendall Refining Co., Bradford, Pa.; R. D. Lowe, Elk Refining Co., Charleston, W. Va.; W. E. Miller, Tiona Refining Co., Clarendon, Pa.

Central States Group: Councillors: E. E. Harrington, National Refining Co., Cleveland, Ohio; Henry Hauseman, Pure Oil Co., Chicago, Ill.; W. W. Klingensmith, Transcontinental Oil Co., Tulsa, Okla.; S. T. Rion, Ashland Refining Co., Ashland, Ky.; A. M. Stevens, Standard Oil Co. of Kentucky, Louisville, Ky.

8. Fire prevention and safety. R. A. Wotowitch, trustee in charge. Councillors: Frank G. Benedict, Sinclair Refining Co., New York City, N. Y.; Harold Eaton, Valvoline Oil Corp., Butler, Pa.; Frank A. Epps, Tide Water Oil Co., New York City, N. Y.; James H. Herbert, Standard Oil Co. of Ohio, Cleveland, Ohio; W. D. Manz, Tri-State Refining Co., Kenova, W. Va.

9. Insurance: O. P. Keeney, trustee in charge: Councillors: Wayne K. Glenn, Pennsylvania Refining Co., Karns City Pa.; Harold W. Jackson, Kendall Refining Co., Bradford, Pa.; L. C. Jamieson, Viking Oil Corp., Clarendon, Pa.; W. A. Powell, Tiona Refining Co., Philadelphia, Pa.; C. E. Townsend, Sun Oil Co., Philadelphia, Pa.

Associate councillor: Houston Dunn, National Petroleum Mutual Fire Insurance Co., Philadephia, Pa.

LEGAL

DEPARTMENTAL OIL AND GAS MINING LEASES FOR SALE

Sealed bids will be received at the Kiowa Indian Agency, Anadarko, Oklahoma, until 10:00 A. M., Thursday, December 5th, 1929, for oil and gas mining leases covering restricted allotted Indian land located in Caddo, Comanche, Cotton, and Tillman Counties, Oklahoma. For further particulars, general instructions and information, list giving descrip ion of land, etc., write J. A. BUNTIN, Dist. Supt., in Charge, Kiowa Indian Agency, Anadarko, Oklahoma.

Will Seek Extension Of Proration in Big Fields of Oklahoma

Operators in the fields of Oklahoma that are being prorated are making preparations for a continuance of proration through the winter months subject to the order of the Oklahoma Corporation Commission, which order will be asked for some time in December.

Statisticians are now preparing a report which will show the approximate demand for Oklahoma crude oil in January, February and March, while another group of experts are working on estimates which will show the potential production of the numerous pools for which a proration order will be asked.

On December 1 Oklahoma City and East Earlsboro will go on a 50 per cent proration basis and the Logan County and Greater Seminole Pools outside of East Earlsboro will be prorated 25 per cent.

The estimated potential production of Oklahoma at present is around 855,000 bbls. of which 165,000 bbls. may be credited to Oklahoma City alone. By the end of March, 1930, it is estimated that between 125 and 135 wells now drilling in that area will have been completed. As there is a considerable variation in the initial production of wells in the Oklahoma City Pool the job of estimating the potential production of February and March from 150 or more wells will require the wisdom of a Solomon, but no doubt seems to prevail that it will be very large, even though there is a tendency in some quarters to fear that the water situation in that field will make itself felt seriously before the end of the winter.

The Oklahoma City Field has thus far shown that it can supply the industry with wells of 20,000 bbls. and even 40,000 bbls. initial production. It may even exceed its record before the field is very much older. There has been no demonstrations as to the potentiality of these excessively big wells for a period of more than one day. The rules governing the proration of the field control these new producers and they are shut in after showing what they can do in a day or a part of a day.

There seems no doubt that the Corporation Commission will extend proration. When the first of the year opens it will be more necessary to cut back unnecessary production than when the order was issued in October, and to a greater degree. The Oklahoma City Field looks like the greatest Oklahoma has yet presented to the industry. Unless the production is held in the ground until refinery requirements demand it, the oil would become a very cheap commodity coming from a field where wells cost from $110,000 to $160,000 to drill.

Pipe Stills

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Dallas, Texas . . . . . 714 Kirby Bldg.
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Have you considered the application of Vapor Phase Refining in your plant? The chances are that you too will find it possible to

Increase your gasoline yields,
Improve your gasoline quality, and
Cut your refining costs.

We will be glad to go over your own conditions with you and show you how.

THE GRAY PROCESSES CORPORATION
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NEWARK, NEW JERSEY

Of Interest to Sales Departments

Motor Coach Demand For Gasoline and Oil Gains Rapidly

Motorcoaches, which are exceptionally large consumers of gasoline and motor oils, are outstripping other means of transportation according to Frederick C. Horner of the General Motors Corp. In ad address at the transportation meeting of the Society of Automotive Engineers at Toronto, Mr. Horner presented detailed data showing the large gain in all classes of motorcoach travel.

From the oil industry's angle this development is adding materially to the consumption of motor fuels and motor oils. The average motorcoach uses a minimum of 10 gallons of gasoline daily and in many cases the consumption averages around 30 gallons daily. These figures compare with consumption of 1½ gallons per day for the average automobile.

Mr. Horner points out that the greater convenience of the motorcoach has found favor with the public and transportation companies using other equipment have been forced to change or at least supplement their operation with motorcoaches. The following table is presented to show the growth on motorcoach lines since 1912:

Passengers carried by—	First 5-year 1912 to 1917	Second 5-year 1917 to 1922	Third 5-year 1922 to 1929
Steam trains	62,557,128	99,229,269	92,826,473
Surface electric lines	2,101,744,147	353,969,892	400,044,561
Rapid transit lines	269,828,710	470,515,886	368,644,210
Motorcoach lines	.....	*850,000,000	1,674,000,000

*First authentic record.

"As evidenced by these figures," said Mr. Horner, "the advent of the motorcoach has very materially changed the riding habit of our people. The figures indicate clearly the truly phenomenal growth of motorcoach transportation in the United States during the last decade.

"The short haul, intercity and intrastate motorcoach service is still more impressive in the volume of miles and passengers carried, the figures showing 4,085,000,000 passenger-miles of transportation sold and 292,000,000 passengers carried during 1928. Some form of motorcoach service is operated between all cities and towns of any size, and these services are continously being improved. Here I would point out that the more convenient and comfortable we make any form of transportation service, granted the traffic is present, the greater the riding habit will become.

Growth in Cities

"According to the latest figures compiled by Bus Transportation as of January 1, 1929, slightly more than one-half of the 1,032 cities in the United States having a population of more than 10,000 had some form of local motorcoach service. Of approximately 625 such cities reporting bus service, 153 or 29 per cent had no other means of public transportation than buses, taxicabs and private automobiles. In London, the motor omnibus is such a big factor in the city transportation picture that nearly 5,000 are in daily service and during 1928, carried more than 1,250,000,000 passengers. Although we have nothing in the United States to compare with this operation, still our city service bus occupies a very important place in our city-transportation structure. It has made a real contribution to the new demands caused by changed conditions. New sections of cities have been opened, creating new transportation demands which have been filled by the city-type motorcoach. Feeder lines, co-ordinated with electric railways and mainline motorcoach service, have come to be as necessary a part of the transportation facilities of most of our cities as the streets on which the electric

(Continued on Page 170)

SEVERAL STATES WILL ATTEMPT TO ADVANCE GASOLINE TAX NEXT YEAR

The oil industry is faced with further increases in gasoline taxes during the coming year according to reports from several states in which legislatures will be in session. A tax of 4 cents will become effective in Oregon on January 1 and it is feared that several other states will follow the lead of that State which was the first to provide for a gasoline tax, unless some concerted action is taken to prevent the further spread of this method of raising funds.

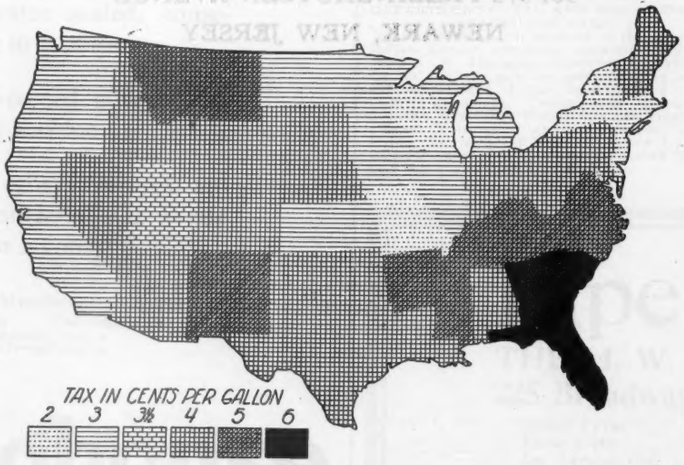
In 1929, 21 states increased their tax rate and in addition New York adopted a state tax for the first time and Illinois passed a law providing for the tax to take the place of the law which was declared unconstitutional in 1928. During the past year the precedent of a 6-cent tax was established when that rate became effective in South Carolina on March 16, 1929. Since that time Florida and Georgia, adjoining states, have passed laws providing for the 6-cent tax.

The fact that an adjoining state has a higher tax is generally the excuse presented for an advance. Starting with a 1-cent tax in Oregon in 1919, this line of reasoning has been the basis for increases until now 2 cents is the minimum tax rate and this is effective in only seven states. Eleven states have a 3-cent tax, one 3½ cents, nineteen 4 cents and eight 5 cents. It is estimated that the tax in United States will total around $425,000,000 in 1929 with $500,000,000 assured for 1930 without further increases in tax rates.

The following table which was prepared by the American Petroleum Institute shows the tax rates by states and the dates effective:

State and rate effective—	Rate cents per gallon
Alabama, January 25, 1927	4
Arizona, August 12, 1927	4
Arkansas, June 9, 1927	5
California, July 29, 1927	3
Colorado, May 1, 1927	4
Connecticut, June 1, 1927	2
Delaware, March 24, 1927	3
District of Columbia, May 23, 1924	2
Florida, July 1, 1929	6
Georgia, September 1, 1929	6
Idaho, March 1, 1927	4
Illinois, August 1, 1929	3
Indiana, April 1, 1929	4
Iowa, April 30, 1927	3
Kansas, April 1, 1929	3
Kentucky, February 21, 1926	5
Louisiana, January 4, 1929	4
Maine, October 29, 1927	4
Maryland, April 1, 1927	4
Massachusetts, January 1, 1929	2
Michigan, September 4, 1927	3
Minnesota, May 1, 1929	3
Mississippi, December 1, 1928	5
Missouri, January 1, 1925	2
Montana, April 1, 1929	5
Nebraska, April 1, 1929	4
Nevada, April 1, 1925	4
New Hampshire, January 1, 1928	4
New Jersey, July 1, 1927	2
New Mexico, March 7, 1927	5
New York, May 1, 1929	2
North Carolina, April 1, 1929	6
North Dakota, July 1, 1929	3
Ohio, April 18, 1929	4
Oklahoma, June 23, 1929	4
Oregon*	3
Pennsylvania, July 1, 1929	4
Rhode Island, June 1, 1927	2
South Carolina, March 16, 1929	6
South Dakota, July 1, 1927	4
Tennessee, February 16, 1929	5
Texas, July 16, 1929	4
Utah, April 1, 1925	3½
Vermont, April 1, 1929	4
Virginia, March 19, 1928	5
Washington, July 1, 1929	3
West Virginia, July 1, 1927	4
Wisconsin, April 1, 1925	2
Wyoming, April 1, 1929	4

*Oregon tax of 3 cents to be increased to 4 cents January 1, 1930.



—Map by Western Petroleum Refiners Association.

STATE GASOLINE TAXES IN UNITED STATES
(Rates per gallon)

NAVY DEPARTMENT ASKS FOR BIDS ON KEROSENE

WASHINGTON, D. C., Nov. 25.—The Navy Department has invited bids for supplying the Navy with kerosene. Bids are to be opened December 6.

The places for delivery and amounts of kerosene to be supplied follow: Portsmouth, N. H., 5,000 gallons; Boston, Mass., 8,500 gallons; Submarine Base, Conn., 10,000 gallons; Newport, R. I., (Naval training station), 2,400 gallons; Newport, R. I., (contractor's dock), 3,675 gallons; Newport, R. I., (Naval torpedo station), 15,000 gallons; Brooklyn, N. Y., 40,000 gallons; Philadelphia, Pa., 32,000 gallons; Washington, D. C., 5,000 gallons; Annapolis, Md., 6,000 gallons; Hampton Roads, Va., (Naval supply depot, Naval operating base), 87,500 gallons; Charleston, S. C., 15,000 gallons; New Orleans, La., 6,000 gallons; San Diego, Calif., 33,000 gallons; San Pedro, or Los Angeles, Calif., 9,000 gallons; San Francisco, Calif., 12,000 gallons; Mare Island, Calif., 37,000 gallons, and Pudget Sound, Wash, 31,000 gallons.

OIL BURNER SHOW TO BE HELD IN CHICAGO, APRIL 7

The largest oil burner show in the history of the association will be one of the features of the seventh Annual Convention of the American Oil Burner Association, which will open at the Hotel Stevens in Chicago, on Monday, April 7, 1930. The convention this year will continue for a whole week, starting on Monday evening and ending on the night of Saturday, April 12. The annual dinner will take place on Thursday evening.

"Past conventions," says Harry F. Tapp, executive secretary of the association, "have been held for the primary purpose of stimulating interest and progress within the industry. While the 1930 gathering will continue this fundamental policy with vigor, special steps are being taken to attract consumer interest. A large attendance of the buying public is confidently expected in view of the general acceptance of oil heating and the growth that the industry has attained."

The mornings will be devoted to business meetings and addresses. The exposition will open each day at 1:30 p.m. and stay open until 11 p.m. This arrangement has been made to give plenty of opportunity for delegates to attend all meetings and have their afternoons and evenings free for the exhibits, which this year will be more extensive and varied than at any former convention.

INVESTIGATE OIL FOR HEAVY-DUTY ENGINES

The carbon-residue test is a fairly reliable index of carbon deposition in a poppet-valve engine and can be used in connection with paraffin-base oils, according to an investigation conducted by C. J. Livingstone, E. C. Martin and S. P. Marley of the Mellon Institute of Industrial Research. In a paper presented at the transportation meeting of the Society of Automotive Engineers, Toronto, November 12 to 15, the authors explained the results obtained from their investigation relative to carbon deposits with heavy-duty engines.

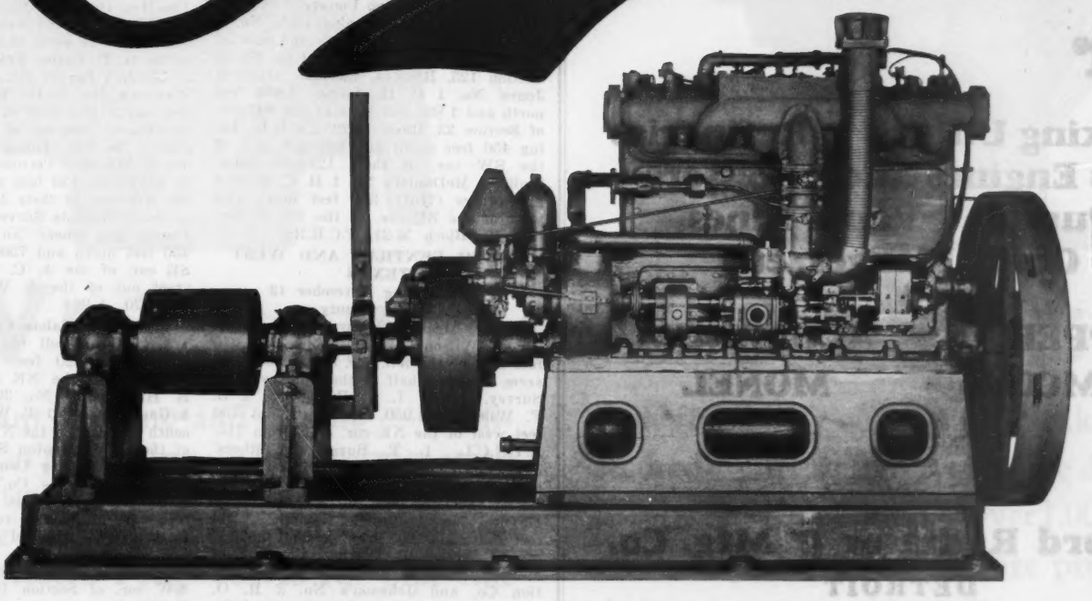
In making these tests 18 sleeve-valve-engine motorcoaches of the Pittsburgh Motor Coach Co. were used. These were divided into three groups of six vehicles each; the first group was lubricated with a paraffin-base oil of normally high carbon-residue value; the second, with a paraffin-base oil of extremely low carbon-residue value; and the third, with a typical naphthene oil. The fuel was an average grade of motor gasoline. In general, no deviation was made from the regular maintenance practice but all steps of maintenance and servicing were under the supervision of the authors.

Tentative conclusions drawn from the tests are that the carbon-residue test is an index of carbon deposition. Protection to the user from excessive carbon deposits can be secured by placing reasonable limits on carbon-residue values in specifications for oils of the same viscosity class.

In the case of a sleeve-valve engine, a paraffin oil of very low carbon-residue value was only slightly better than one having a normal value, and both were decidedly inferior to the naphthene oil. The addition of a provision for a vacuum distillation to the specification is recommended. This is stated tentatively by the authors as requiring a volatility of at least 90 per cent when distilled under a 10-millimeter vacuum and the oil should boil between suitable limits of liquid temperature, those for the motorcoach engines used being approximately 550 and 700 degrees Fahrenheit.

Buffalo

"D-E" POWER UNIT



4 cylinder, 6¾″ bore, 9″ stroke, 400 to 800 RPM. Gas or Gasoline

The analysis of operating records and actual experiences of owners, invariably recommend the purchase of a BUFFALO Power Unit for oil field power.

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COPPER ALUMINUM
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McCord Radiator & Mfg. Co.
DETROIT

NEW LOCATIONS IN TEXAS PANHANDLE AND NORTH AND WEST TEXAS FIELDS

TEXAS PANHANDLE

Week ending November 13

Carson County

Continental Oil Co.'s No. 2 B. F. Block, 990 feet south and 330 feet west of the NE cor. of the SE of Section 111, Block 4, I.&G.N. Empire Gas & Fuel Co.'s No. 22 S. B. Burnett estate, at the C of the NE of Section 98, Block 5, I.&G.N. Herrogan Oil Co.'s No. 1-A L. C. McConnell, 330 feet south and 330 feet east of the NW cor. of the W half of the SW of Section 187, Block 3, I.&G.N.

Gray County

McAuley and others' No. 2 Morse, 330 feet south and west of the NE cor. of the SE of Section 2, Block 26, H.&G.N. The Texas Company's No. 18 G. H. Saunders, 310 feet south and 330 feet east of the NW cor. of the SE of Section 3, Block 1, A.C.H.&B. Same company's No. 19 G. H. Saunders, 330 feet north and west of the SE cor. of the NW of Section 3, Block 1, A.C.H.&B. Wilcox-Pampa Oil Co.'s No. 10, Combs & Worley, 330 feet south and west of the NE cor. of the SW of the SW of Section 35, Block 3, I.&G.N.

Hutchinson County

Danciger Oil & Refining Co.'s No. 3 J. L. Moore, 330 feet south and east of the NW cor. of the W half of the SE of Section 125, Block 4, I.&G.N. Gates & Jones' No. 1 C. H. Jasper, 1,850 feet north and 1,800 feet west of the SE cor. of Section 23, Block M-23, T.C.R.R., being 450 feet north and 330 feet east of the SW cor. of their 121-acre lease. Smith & McDaniel's No. 1 H. C. Pitcher and others (Hill), 330 feet north and west of the SE cor. of the SE of Section 19, Block M-21, T.C.R.R.

NORTH CENTRAL AND WEST TEXAS

Week ending November 13

Archer County

Barkley-Meadows-Riner & Bailey's No. 2 L. F. Wilson-C, 558 feet north and 675 feet east of the SW cor. of the south 80 acres of the E half of the Thomas Toby Survey, A-646. L. T. Burns' No. 2 L. F. Wilson-P, 1,050 feet south and 750 feet west of the NE cor. of Section 115, A.T.N.C.L. L. T. Burns and others' No. 1 Parrish Brothers, 690 feet south and 150 feet east of the NW cor. of Lot 2, Section 106, A.T.N.C.L. J. C. Haynes' No. 1 Joseph Hemmie, 1,200 feet south and 800 feet west of the NE cor. of Section 61, Clark & Plumb Subdivision, Block 3. Atlantic Oil Production Co. and Johnson's No. 3 R. O. Prideaux, 150 feet north and east of the SW cor. of the west 50 acres of the south 100 acres of Section 1,860, T.E.&L. R. L. Carter's No. 1 S. L. Scott, 80 feet north and 1,030 feet east of the NW cor. of the Thomas McCoy Survey, A-269, and located in the B.S.&F. Survey No. 2, A-1,205. Clampett and others' No. 1 J. T. Richardson-B, 10 feet north and west of the SE cor. of the north 20 acres of the west 40 acres of Section 14, South Anderson Ranch Subdivision. Consolidated Oil Co. and Hill's No. 1 A. P. Neal, 1,866 feet north and west of the SE cor. of the D. White Survey No. 10, A-673. Golding & Cochran's No. 1 C. H. Kieke, 1,300 feet south and 150 feet east of the NW cor. of Section 25, G. P. Meade Subdivision, L. M. Pasture. H. Hines' No. 1 H. L. Morrison, 150 feet north and 1,083 feet east of the SW cor. of Section 2,403, T.E.&L. Perkins & Cullum's No. 1 George B. Hamilton, 150 feet north and 214 feet west of the SE cor. of the north 42 acres of the G. B. Hamilton 220.5-acre tract out of Section 6, B.B.B.&C., A-1,266. Petroleum Producers and Perkins & Cullum's No. 1 G. A. Lauster, 1,158 feet south and 150 feet west of the NE cor. of the east 80 acres of the northwest 160 acres of Section 3, B.B.B.&C., A-51. Prairie Oil & Gas Co.'s No. 2 Falls County School Land, 150 feet south and 800 feet east of the NW cor. of Section 22, Falls County School Land, A-130. J. R. Williams and others' No. 3 J. A. Kunkel, 1,050 feet south and 450 feet east of the NW cor. of the west 40 acres of the east 60 acres of Section 4, Thomas McCoy Survey, A-269.

Baylor County

Grisham and Barnsdall Oil Co.'s No. 1 W. H. Portwood, 150 feet north and east of the SW cor. of the SE of the SE of Section 1,281, T.E.&L.

Brown County

P. French's No. 4 D. Belvin, 150 feet south and east of the NW cor. of the D. Belvin 40-acre tract out of Section 42, H.T.&B. Humble Oil & Refining Co.'s No. 4 R. Hickman-B, 485 feet south and 150 feet east of the NW cor. of the F. M. Kinsey Survey, A-1,786. Humble Oil & Refining Co.'s No. 10 J. C. Kilgore-A, 650 feet north and 200 feet east of the SW cor. of the E half of Section 3, J. Delgado Survey No. 789. Humble Oil & Refining Co.'s No. 17 J. C. Kilgore-B, 844 feet north and 200 feet west of the SE cor. of the W half of Section 3, J. Delgado Survey No. 789. Michael-Gibson & Johnson's No. 1 R. Hickman, 150 feet south and east of the NW cor. of the west 40 acres of the south 80 acres of the F. M. Kinsey Survey, A-1,786. Ven-Mex Oil Co.'s No. 1 G. T. Butler, 150 feet north and west of the SE cor. of the east 44 acres of the west 94 acres of the G. T. Butler 300-acre tract of the J. McGloin Survey No. 798, A-1,499. J. Warren's No. 3 H. M. Truehart, 150 feet north and east of the SW cor. of his 40-acre lease out of the M. B. Lamar Survey No. 638. Young Brothers-Alexander & Woodley Petroleum Co.'s No. 23 R. Hickman, 150 feet north and east of the SW cor. of their 100-acre lease out of the J. McGloin Survey No. 801, A-668. Prasky and others' No. 1 A. C. Evans, 450 feet north and 750 feet west of the SE cor. of the A. C. Evans 106.5-acre tract out of the J. Woodward Survey No. 620, A-964.

Callahan County

E. P. Campbell Oil Co.'s No. 1 T. Windham, 1,320 feet south and 2,150 feet west of the NE cor. of the heirs B. Hill Survey No. 399. Mid-Tex Oil & Gas Co.'s No. 1 T. Windham, 660 feet south and east of the NW cor. of the NE of the G. W. Denton Survey No. 370.

Clay County

Lone Star Gas Co.'s No. 24 J. D. Stine estate, 150 feet south and 1,469 feet west of the NE cor. of Section 17, Parker County School Land, A-374. Art and others' No. 3 G. W. Byers & Co., 867 feet south and 150 feet east of the NW cor. of Section 16, Byer Brothers Subdivision.

Coleman County

Atlantic Oil Production Co.'s No. 1 M. T. Overall, 200 feet south and 3,820 feet east of the NW cor. of Section 21, Block 1, G.H.&H. Taylor-Link Oil Co.'s No. 2 J. L. Stewardson, 150 feet north and west of the SE cor. of the W half of the SE of Section 91, E.T.R.R.

Comanche County

J. S. Willis and others' No. 1 A. Underwood, 150 feet south and west of the NE cor. of the west 80 acres of the SE of Section 27, Deaf & Dumb Asylum Land.

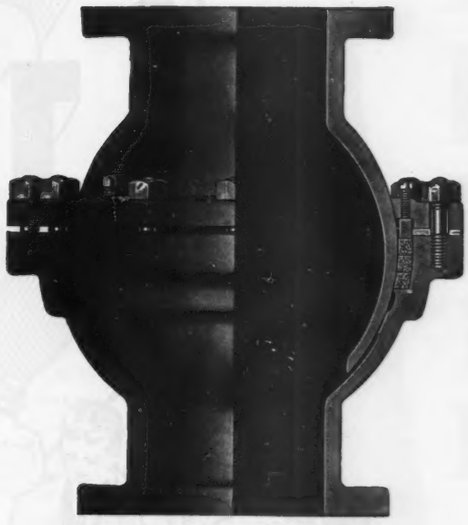
Concho County

G. Lamb and others' No. 1 H. L. Mosley, 150 feet north and east of the SW cor. of the NW of the heirs L. Bachmann Survey No. 1,838.

Cooke County

Lloyd Oil Corp.'s No. 5 D. B. Wheelock, 150 feet north and 493 feet west of the SE cor. of the west 80 acres of the east 120 acres of the C. Underwood Survey, A-1,073. Benson & Benson's No. 1 H. Felderhoff, 150 feet north and east of the SW cor. of the south 40 acres of the west 80 acres of the H. Felderhoff 160-acre tract out of the C. R. B. Anderson Survey, A-7. Coline Oil Co.'s No. 6 J. F. Huggins, 150 feet south and 1,650 feet west of the NE cor. of their 56-acre lease out of the S.P.R.R. Survey No. 9, A-982. Danciger Oil & Refining Co.'s No. 16 J. F. Huggins, 391 feet north and 510 feet west of the SE cor.

Pipe Lines Need BARCO



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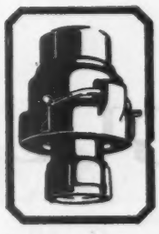
BARCO



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Mobile (Magazine Point, Ala.)

Philadelphia (Girard Point, Pa.)
Charleston, S. C.
Savannah, Ga.

New Orleans (Gretna, La.)
Port Arthur, Texas
Galveston, Texas

of their 76-acre lease out of the S.P.R.R. Survey No. 9, A-982. Kewanee Oil & Gas Co.'s No. 2 Mrs. William Franklin (Coker), 4,038 feet north and 596 feet west of the most southerly SE cor. of the A. Rodriguez Survey, A-851. C. C. Lanier and others' No. 1 Mrs. T. F. Young, 150 feet north and 550 feet west of the SE cor. of the J. Long Survey, A-582.

Crockett County

Cushing Refining & Gasoline Co.'s No. 3 L. P. Powell, 330 feet north and west of the SE cor. of Section 53, Block BB, G.C.&S.F.

Eastland County

J. M. Gholson and others' No. 3 C. V. Fox, 900 feet south and 500 feet west of the NE cor., Section 28, League 2, McLennan County School Land. Hoffman & Page's No. 4 I. B. Goster-B, 150 feet north and west of the SE cor. SW NW, Section 27, Block 2, H.&T.C. Survey. Texas Pacific Coal & Oil Co.'s No. 3 Texas Pacific Coal & Oil Co. (Durocher), 2,205 feet north and 2,987 feet west of the southeast corner of the C. L. Durocher Survey.

Fisher County

Cranfill & Reynolds' No. 1 D. M. Bledsoe, 330 feet north and east of the SW cor. SE, Section 200, B.B.B.&C. Survey.

Foard County

Humble Oil & Refining Co.'s No. 2 John Matus, 500 feet south and 150 feet east of the NW cor. SW, Section 33, Block 8, H.&T.C. Survey.

Howard County

Amerada Petroleum and Rycade Oil Co.'s No. 13 D. Roberts, 250 feet north and 1,320 feet west of the SE cor., Section 128, Block 29, W.&N.W.R.R. Survey. California Co.'s No. 5 D. Roberts, Lease 1, 1,654 feet north and 330 feet west of the SE cor., Section 137, Block 29, W.&N.W.R.R. Survey. Continental Oil Co.'s No. 2 H. R. Clay, Lease 1, 330 feet north and 990 feet east of the SW cor., Section 127, Block 29, W.&N.W.R.R. Survey. Merrick & Lamb's No. 11 H. R. Clay, 200 feet north and 697 feet west of the SE cor., Section 126, Block 29, W.&N.W.R.R. Survey. Ward Oil Co.'s No. 16 D. Roberts, 1,897 feet north and 2,430 feet east of the SW cor., Section 137, Block 29, W.&N.W.R.R. Survey. Ward Oil Co.'s No. 17 D. Roberts, 1,897 feet north and 1,878 feet east of the SW cor., Section 137, Block 29, W.&N.W.R.R. Survey. Ward Oil Co.'s No. 18 D. Roberts, 1,885 feet north and 1,400 feet east of the SW cor., Section 137, Block 29, W.&N.W.R.R. Survey. Same company's No. 19 D. Roberts, 1,954 feet north and 830 feet east of the SW cor., Section 137, Block 29, W.&N.W.R.R. Survey.

Irion County

Beesley and others' No. 1 Sawyer Cattle Co., 1,320 feet north and east of the SW cor., Section 3,032, Block 24, H.&T.C. Survey.

Jack County

C. W. Boller and others' No. 2 J. A. Raley, 1,968 feet south and 300 feet west of the northeast corner of the west 100 acres of the J. A. Raley 333-acre tract out of the I. Hughson Survey, A-256. Bryson Oil & Gas Co.'s No. 2 O. Loving-A, 800 feet north and 750 feet east of the southwest corner of the Hrs. J. C. Ragsdale Survey, A-504. B. C. Gilmore and others' No. 1 Mrs. S. J. Price, 150 feet north and west of the southeast corner of the west 50 acres of the Mrs. S. J. Price 142-acre tract out of the S.P.R.R. Survey No. 1, A-583. Petroleum Producers Co. and others' No. 1 J. A. Raley, 300 feet south and east of the northwest corner of the south 60 acres of the east 120 acres of the west 220 acres of the J. A. Raley 333-acre tract out of the I. Hughson Survey, A-256.

Menard County

Cromwell & Duffy's No. 2 R. S. Winslow, 250 feet south and east of the NW cor. NE NE, Section 36, J. H. Gibson Survey.

Montague County

Carter and Rycade's No. 10 R. W. Cunningham and others, 150 feet north and 450 feet west of the southeast corner of their 40-acre lease out of the L. B. Norton Survey, A-574. Continental Oil Co.'s No. 25 N. J. Howard and others, 150 feet north and 225 feet west of the southeast corner of the John Chambliss Survey, A-123. Continental Oil Co. and Bridwell Oil Co.'s No. 1 Mrs. L. Cunningham-C, 6,008 feet north and 1,500 feet west of the southeast corner of the T. R. Edmondson Survey, A-222.

Palo Pinto County

O. C. Proffitt's No. 1 R. S. Dalton, 700 feet north and 150 feet east of the SW cor., Section 1,787, T.E.&L. Survey.

Pecos County

Gulf Production Co.'s No. 22 M. A. Smith and others, Tract B, 330 feet south and 1,710 feet east of the NW cor., Section 22, Block 194, G.C.&S.F. Survey. Humble Oil & Refining Co.'s No. 12 Smith, 1,018 feet south and 330 feet east of the NW cor., Section 36, Block 194, G.C.&S.F. Survey. Landreth Production Co. and World Oil Co.'s No. 6 University Land-B, 990 feet south and west of the NE cor., Section 13, Block 18, University Land. McMan Oil & Gas Co.'s No. 10 M. A. Smith-C, 1,843 feet south and 1,815 feet west of the NE cor., Section 25, Block 194, G.C.&S.F. Survey. Taylor-Link Oil Co.'s No. 10 University Land, 990 feet south and 330 feet west of the NE cor. W half SE, Section 13, Block 18, University Land. H. T. Odneal's No. 1 James Power, 2,640 feet south and 150 feet east of the NW cor., Section 1, Block 132, T.&St.L. Survey.

Shackelford County

Cranfill & Reynolds' No. 1 J. B. Matthews, 150 feet north and east of the SW cor., Section 31, Block 10, E.T.R.R. Survey. Frizzell & Smalley's No. 3 J. W. Alexander, 450 feet northeast of the southwest line and 784 feet northwest of the southeast line of Section 580, T. E.&L. Survey. Humble Oil & Refining Co.'s No. 20 W. I. Cook, at the C S half SW, Section 84, Block 10, E.T.R.R. Survey.

Stephens County

Grantor Oil Co.'s No. 37 P. Swenson, 600 feet south and 1,500 feet east of the NW cor., Section 5, Orphan Asylum Land. Hefflin & Bartrug's No. 1 D. S. Mitchell, 140 feet north and east of the SW cor., Section 64, Block 4, T.&P. Survey.

Taylor County

Adams-Ferguson & Hobbs' No. 1 J. L. Lowe, 150 feet south and east of the NW cor., Section 19, League 120, Guadalupe County School Land.

Ward County

Sun Oil Co.'s No. 1 George Sealy, 330 feet south and west of the NE cor., Section 88, Block F, Gunter & Munson, Maddox Brothers and Anderson Survey.

Wichita County

Culberson Co.'s No. 63 J. L. and T. J. Waggoner, 2,256 feet south and 400 feet west of the NE cor., Section 13, B.S.&F. Survey, A-343. Culberson Co.'s No. 64 Waggoner Brothers, 2,206 feet south and 400 feet west of the NE cor., Section 13, B.S.&F. Survey, A-343. Culberson Co.'s No. 65 Waggoner Brothers, 1,500 feet south and 1,450 feet west of the NE cor., Section 13, B.S.&F. Survey, A-343. Panhandle Refining Co. and others' No. 13 Burnett and others-A, 600 feet north and 510 feet west of the SE cor. NE, Section 6, S.A.&M.G. Survey, A-464. Ryan Petroleum Corp.'s No. 111 G. L. Nance, 3,400 feet south and 930 feet east of the northwest corner of the S. O. Fowler Survey, A-78. The Texas Company and others' No. 13 Waggoner Brothers, 920 feet south and 150 feet west of the northeast corner of Lot 29, H. George Survey, A-454.

Wilbarger County

Bradstreet & Grisham's No. 2 Waggoner-F, 250 feet north and 1,200 feet east of the southwest corner of the northeast 160 acres of Section 37, Block 4, H.&T.C. Survey. Davis Oil Corp.'s No. 3 Waggoner, 1,161 feet south and 560 feet west of the NE cor., Section 35, Block 2, H.&T.C. Survey. Fain-McGaha Oil Corp.'s No. 16 Waggoner-L, 1,975 feet north and 205 feet west of the southeast corner of their lease "L," out of Section 31, Block 4, H.&T.C. Survey. Same corporation's No. 20 Waggoner-W, 877 feet north and 150 feet east of the southwest

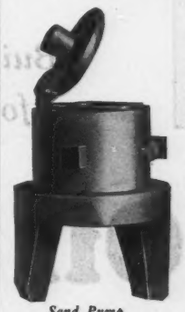
(Continued on Page 168)

MILLER COMBINATION BAILER & SAND PUMP—*Speed With Certainty*

Star Bottom used for cutting the sand loose and preferred by some to the Chisel Bottom.

Chisel Bottom will save the expense of running tools and its chisel shape prevents sticking in tightly packed sands.

Bailer Bottom will speed up production in cavy holes by time saved in picking up cuttings.



Sand Pump Bottom illustrated in position in the pump.

Cleans Your Wells IN HALF THE TIME

MILLER

THE MILLER can be used as either a sand pump or bailer. It will clean out faster due to the sand line running through the bail, making it possible to use a 25 or 30 foot tube.

The Plunger is made 18 inches long with eight water courses permitting the fluid to seal the valve on top of the plunger, thus creating a greater suction than in any other pump made—*then too*, there is a type bottom for each particular job and with both the latch and set screw used in the Miller it is impossible to lose a bottom.

Built to stand the tough jobs, constructed of National Seamless Tubing and Sivyer Steel Castings, made throughout of steel and eliminates the use of leather washers. Made in 2½, 3, 3½, 4, 4¼, 5, 5½, 7 and 9 inch sizes and lengths up to 30 feet.

Send for fully descriptive circulars and prices, the Miller Sand Pump is sold through the leading supply stores or direct from the factory.

Patented

March 1, 1921—No. 1370340

January 20, 1925—No. 1523604

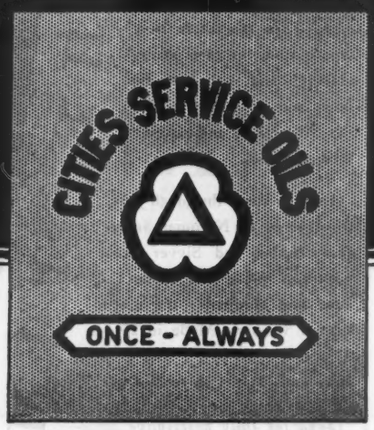
MILLER

Combination Bailer & Pump Co.

General Offices and Plant

Sapulpa, Oklahoma

No service too severe—no specifications too high. No product bearing our name is permitted to reach the hands of a customer until it first meets our own rigid tests.



Build your business on our reputation for satisfactory petroleum products

Empire Oil & Refining Company

Subsidiary Cities Service Co.

GENERAL SALES OFFICES—TULSA, OKLA.

New St. Louis Address: 1218 Olive St., Plaza Oil Investment Bldg.

NEW YORK PHILADELPHIA CLEVELAND CHICAGO ST. PAUL
KANSAS CITY FT. WORTH TORONTO

OKLAHOMA GROSS PRODUCTION THIRD QUARTER

(Continued from Page 105)

Name and address—	No. bbls. oil	M. ft. gas	Amount
Loffland Bros. Co., Tulsa	8,747.11	.....	12,428.30
Laughlin, Nancy J.,* Cushing	.....	.....	2,175.42
Laughlin, Sarah, Oklahoma City	.....	.....	2,722.60
Laughlin, R. W.,* Oklahoma City	.....	.....	5,644.11
Lindley, E. D.,* Alex	.....	.....	7,463.52
Lesh and McCall et al, Nacona, Tex.	11,738.19	.....	9,977.46
Lyon, Stuart G.,* New York, N. Y.	.....	.....	2,159.76
Lamar Royalty Co.,* Tulsa	1,957.55	.....	2,664.27
Laurel Oil & Gas Co., Philadelphia, Pa.	86,224.51	.....	131,052.06
Laurel Oil & Gas Co., Philadelphia, Pa.	.....	133,958	4,512.30
Mc			
McGill, H. W., Ardmore	7,825.59	.....	10,273.54
McMahan, Mary Shear, Tulsa	.....	.....	2,948.13
McMahan, C. L., Tulsa	3,855.33	.....	6,359.20
McMahan, R. M., trustee, Tulsa	3,150.92	.....	6,292.05
McMahan, C. L., and C. L. McMahan, Inc., Tulsa	Oil	.....	113,389.02
McMahan, C. L., and C. L. McMahan, Inc.,* Tulsa	9,970.90	.....	16,444.75
McMahan, C. L., Inc., and C. L. McMahan, Inc., Tulsa	.....	.....	7,510.98
McMan Oil & Gas, Tulsa	64,829.32	.....	97,862.44
McMan Oil & Gas, Tulsa	.....	Gas	4,271.03
McCully, Charles, Jr.,* Guthrie	.....	.....	6,698.91
McCully, Eli B.,* Hennessy	.....	.....	8,681.70
McCully, Charles,* Hennessy	.....	.....	10,674.49
McCully, Emma,* Hennessy	.....	.....	8,681.70
McConnell, Mrs. Grace M.,* Wewoka	.....	.....	12,282.41
McKenna, John P.,* Chickasha	.....	.....	2,053.79
McQueen, I. R., Oklahoma City	5,380.67	.....	8,796.96
McGee, Jodie, Norman	.....	.....	4,618.91
McGee, R. L.,* Shawnee	.....	.....	22,465.80
McCroskey, Edgar L., Asher	.....	.....	10,424.94
McDaniel, W. F.,* Blackwell	.....	.....	4,508.56
McNamara, I. J.,* Seminole	.....	.....	2,064.59
McRoberts Royalty Co.,* Tulsa	.....	.....	3,435.00
McKat, A. C.,* Okmulgee	.....	.....	3,049.06
McBride, W. C., Inc.,* St. Louis, Mo.	.....	.....	17,899.93
McKee, S. H.,* Tonkawa	.....	.....	8,836.16
McGraw Oil Co., Tulsa	40,920.85	.....	54,695.06
McKinley, George J.,* Independence, Kans.	3,344.70	.....	5,642.14
McCall, William A.,* Yuma, Ariz.	.....	.....	6,677.16
M			
Metcalf, R. J.,* Fort Worth, Tex.	2,177.87	.....	3,616.64
Mullendore, E. M., trustee, Cleveland	.....	.....	42,547.36
Mullendore, E. M., trustee,*	.....	.....	4,710.81
Markham, J. H., Jr.,*	1,290.30	.....	2,189.71
Markham, John H., Tulsa	21,388.70	.....	31,656.47
Misener, F. D., Tulsa	8,066.03	.....	10,548.96
Meridian Gas Co., Dallas, Tex.	.....	115,047	9,395.28
Mussellem, Sophia S.,* Muskogee	3,421.43	.....	6,038.09
Mul-Berry Oil Co., Cushing	.....	.....	65,999.71
Maud Oil & Gas, Oklahoma City	1,307.40	.....	4,992.01
Maud Oil & Gas, Oklahoma City	23,802.99	.....	32,767.71
Moore, Clint, estate, Tulsa	15,223.46	.....	24,375.90
McDonough, W. W.,* Wewoka	.....	.....	4,614.07
Merrick, F. W., and R. W. Coe, Ardmore	11,325.23	.....	14,643.47
Merrick, F. W., Inc., Ardmore	.....	.....	26,688.00
Merrick, Ward S., Ardmore	.....	.....	5,413.15
Marileen Oil & Gas, Blackwell	6,695.47	.....	11,213.31
Malernee Oil Co., Oklahoma City	4,216.46	.....	7,119.93
Margay Oil Corp.,* Tulsa	1,984.79	.....	3,285.13
Margay Oil Corp., Tulsa	94,666.32	.....	146,085.08
Magnolia Petroleum Co., Dallas, Tex.	4,368,314.03	.....	6,563,136.92
Magnolia Petroleum Co., Dallas, Tex.	.....	Gas	152,535.21
Magnolia Petroleum Co.,* Dallas, Tex.	41,951.01	.....	69,426.34
Magnolia Petroleum Co.,* Dallas, Tex.	.....	Gas	2,936.98
Magnolia Petroleum Co., for R. A. Hefner	.....	.....	2,634.58
Magnolia Petroleum Co., for Coker lease	6,383.07	6,269	10,748.86
Magnolia Petroleum Co., suspense	.....	.....	21,835.66
Magnolia Petroleum Co., protest	.....	.....	80,888.23
Minnehoma Oil & Gas, Tulsa	265,869.62	657,486	442,425.57
Marquette Oil Co., Tulsa	10,030.37	.....	15,525.22
Marquette Oil Co., Tulsa	1,570.63	80,669	7,679.51
Midland Royalty Corp.,* New York City	.....	.....	93,857.93
Midco Oil Corp., Tulsa	12,312.03	2,830	19,324.36
Mid-Continent Petroleum Corp., Tulsa	2,103,157.16	.....	3,236,401.57
Mid-Continent Petroleum Corp., Tulsa	.....	Gas	122,952.93
Mid-Continent Petroleum Corp.,* Tulsa	7,648.30	.....	9,290.93
Mid-Kansas Oil & Gas, Findlay, Ohio	666,977.90	.....	1,030,180.99
Mid-Kansas Oil & Gas, Findlay, Ohio	.....	345,255	18,773.08
Mudge Oil Co., Pittsburgh, Pa.	19,852.55	.....	15,608.80
Moore, J. Read,* Wewoka	.....	.....	4,526.17
Morgan, Dudley D., Tulsa	.....	.....	7,986.55
Maguire, Frank,* Newark, N. J.	.....	.....	3,581.69
Meadors, Frank, Jr., Wetumka	7,031.41	.....	11,266.82
Mathis, M. P.,* Shawnee	.....	.....	9,751.92
Melton, Alice, administratrix,* Duncan	.....	.....	2,698.38
Minshall, E. R., Tulsa	3,028.77	5,082	5,133.10
Mole, Gollia,* Keim, Calif.	.....	.....	2,287.39
Macdonough, J. M.,* New York, N. Y.	.....	.....	2,878.16
Massengill, R. E.,* Shawnee	.....	.....	3,405.02
Mayes, E. L.,* Tulsa	.....	.....	51,991.29
Mayhue, G. C.,* Ada	.....	.....	5,235.68
Myers, Alice Clark,* Santa Fe, N. Mex.	.....	.....	3,501.66
Myers, M. T.,* Oklahoma City	.....	.....	10,947.46
Millien & Thomas,* McAlester	3,743.75	.....	4,881.18
Murphy Oil Co. of Pa., Philadelphia, Pa.	8,865.53	.....	12,284.95
Mainard, M. F., Jr.,* Wewoka	.....	.....	2,406.21
Mainard, J. L.,* Wewoka	.....	.....	3,003.87
Milner, Jonas B.,* Allen	.....	.....	5,771.06
Magee & Stipe, Electra, Tex.	3,490.42	.....	5,585.72
Maines, J. W.,* Ada	.....	.....	3,742.79
Mensell, Robert,* Staton, Tex.	.....	.....	6,334.89
Miller Brothers 101 Ranch,* Marland	.....	.....	9,039.86
Meyer, Annie,* Sapulpa	.....	.....	3,071.02
Melton, J. A.,* Shawnee	.....	.....	5,358.26
Mayhue, George M.,* Ada	.....	.....	12,231.98
Mayhue, W. E.,* Ada	.....	.....	5,217.04
Maxey, J. H.,* Oklahoma City	.....	.....	3,758.92
Maud Oil & Gas, Oklahoma City	22,608.03	.....	29,472.54
Melton, J. A.,* Shawnee	.....	.....	2,113.98
Monarch Royalty Corp., Kansas City, Mo.	.....	.....	70,754.66
Munson, Emma, Oklahoma City	.....	.....	3,949.02
N			
Nester Oil Co.,* Ada	.....	.....	3,672.38
Nelson, F. M., New York City	3,979.33	.....	5,372.09
Norvell, Ruby P.,* Wewoka	.....	.....	2,103.48
Norvell, A. S.,* Wewoka	.....	.....	15,669.49
Neel, A. C., and G. C. Poplin, administrator estate of B. F. Nisbett, deceased, Tecumseh	16,646.82	.....	26,265.92
Nowata Oil & Refining Co., Tulsa	7,845.02	17,413	11,306.49
Norwood Oil Co., Tulsa	7,867.53	.....	10,450.66
Novotny, J. A., heirs,* Tonkawa	.....	.....	3,162.69
Nelson, R. L.,* Webb City	.....	.....	3,548.88
Noble, Hattie E.,* Ardmore	2,609.31	.....	3,460.90
Noble, Eva E.,* Ardmore	3,479.09	.....	4,614.55
Neal, Beulah, and John A. Neal,* Wanette	.....	.....	4,074.14
Neal, Justina,* Maysville	.....	.....	13,557.00
New England Oil & Pipe Line, Boston, Mass	5,966.42	.....	9,264.28
New York Royalty Corp.,* New York City	.....	.....	10,582.50
New York Petroleum Royalty Corp., New York City	2,771.60	.....	4,497.55

(Continued on next Page)

Gasoline cannot Leak Past

joints sealed with

G. & B. Pipe Sealing Compound

There need not be any slow, steady leakage of gasoline and profits from these joints in your pump bases. Those joints that are hard to make tight can be made tight with Gilbert & Barker Pipe Sealing Compound. Because gasoline cannot leak past this insoluble Compound.

Joints sealed with it begin leak-proof and stay leak-proof. Small leaks never start, so large leaks never occur.

In your next gasoline pump installation, see to it that G. & B. Compound is used on all joints. Then you'll have a leakless pipe line—one that will never give trouble.

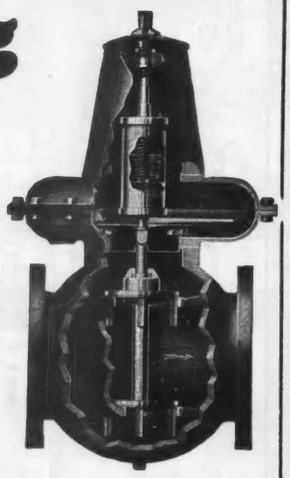
G. & B. Pipe Sealing Compound comes in cans of three sizes: ⅛ pint for 15¢, a handy size for the tool kit; pint for 75¢, a good size for general shop use; and a quart for $1.45, the size to keep on hand for supply.

Make certain that all threads are clean. Spread G. & B. Sealing Compound on the male threads *only*. Make the joint up tight, and you'll have a tight joint permanently.

GILBERT AND BARKER
MANUFACTURING COMPANY
PUMPS AND TANKS FOR THE OIL TRADE
SPRINGFIELD, MASS.

Visible Gasoline Pumps, mechanical measure or sight measure, hand or air operated, equipped with the famous NULTRA *bowls. Also piston type pumps with visible discharge. Pump and tank outfits for motor oils, including the popular* "NARRO-LUBE" *type. Special pipe sealing compound for gasoline and oil pump and tank installations.*

A simple, positive means of relieving tank vapor pressure



THE simplicity and efficient operation of the Davis Supersensitive Gas Relief Valve are indicated by its compact, business-like appearance.

It operates on a fraction of an inch water gauge pressure, providing the supersensitive relief necessary to efficient vapor recovery from oil in storage. It allows the valuable tank vapors to pass into the compressor suction line and also prevents the formation of a vacuum inside the tank.

A diaphragm of exceptionally large area and the balancing of the entire movable assembly by a tension spring make this valve truly supersensitive. A dashpot steadies the action. Internal parts are sulphur resistant.

Write for a Davis catalog, which gives useful data on valve specialties.

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Automatic valve makers for over fifty years

DAVIS VALVE SPECIALTIES

O&GJ 11-28 Gray

OKLAHOMA GROSS PRODUCTION THIRD QUARTER

Name and address—	No. bbls. oil	M. ft. gas	Amount
National Refining Co., Cleveland, Ohio	5,583.83	17,290	8,905.00
National Oil & Development Co., Tulsa	10,056.26	.....	12,965.19
National Union Oil & Gas Co., Blackwell	5,414.64	.....	9,288.90
Nichols, G. A.,* Oklahoma City	.....	.....	13,129.91
Neustadt, Walter,* Ardmore	4,301.35	.....	5,540.27
Norris, W. C., Tulsa	.....	.....	11,990.06
Newman, W. C., Corp., Okmulgee	.....	.....	10,403.00
North Central Texas Oil Co., Inc., New York City.	.....	.....	2,758.26
North, R. B.,* Blackwell	.....	.....	3,556.69
Noble, Margaret Vivian,* Ardmore	17,432.85	.....	27,158.89
New York Royalty Corp.,* New York City	14,267.61	.....	23,598.22
O			
Osage Gas Production Co., Independence, Kans.	439.69	252,535	23,317.97
Ohio Fuel Supply Co., Columbus, Ohio	16,896.33	.....	27,271.43
Olean Petroleum Co., Bristow	.....	.....	6,864.68
Ona Oil Co., Blackwell	.....	.....	37,542.95
Orie Securities Corp., New York City	.....	.....	3,423.62
Oliphant, A. G., Tulsa	7,268.29	.....	6,560.47
O'Rourke Oil Co., Bristow	.....	.....	11,612.32
Orwif, S. S.,* Wewoka	.....	.....	13,797.45
O'Dell, Mrs. Mollie B.,* Richmond, Calif.	.....	.....	7,136.42
Owens, Josie,* Seminole	.....	.....	5,853.37
Owens, Josie,* Seminole	.....	.....	3,645.29
Owen, L. G.,* Tulsa	.....	.....	3,042.06
Osborn, W. B.,* Ada	.....	.....	7,491.66
Obins, W. G., and H. C. Weber, Bartlesville	1,318.29	363,953	6,321.92
Oklahoma Gulf Royalty Corp.,* Tulsa	.....	.....	2,370.46
Oklahoma Power & Water Co., Sand Springs	.....	134,439	13,443.90
Oklahoma National Royalty Co.,* Tulsa	.....	.....	2,395.91
Oklahoma Natural Gas Corp., Tulsa	.....	291,317	29,044.60
Oklahoma Public Service Corp., Cedar Rapids, Iowa	8,898.55	65,172	16,915.57
Oklahoma Gas Utilities Co., Chickasha	.....	Gas	23,426.78
Oklahoma Gas & Royalty Co., Inc.,* Toronto, Canada	.....	.....	2,071.52
Oil Production Royalty, Inc.,* Elizabeth, N. J.	.....	.....	6,578.03
Orwig, S. S., Wewoka	.....	.....	9,210.53
Ohio Osage Oil Co., Tulsa	6,700.66	.....	11,713.00
P			
Pierce Petroleum Corp., Sand Springs	39,992.13	.....	59,567.39
Pierce Petroleum Corp., Sand Springs	.....	17,264	3,451.47
Pierce, R. H., & Co., Inc.,* Tulsa	.....	.....	7,418.84
Pace, George L., Wichita Falls, Tex.	.....	.....	44,426.65
Panther Oil & Gas, Oklahoma City	4,221.54	.....	6,989.34
Penn-Ohio Gas Co., Pittsburgh, Pa.	7,945.11	.....	11,432.41
Pyramid Oil Co., Winchester, Ky.	5,807.78	.....	7,561.35
Pennok Oil Corp., Dallas, Tex.	26,119.45	49,324	46,225.41
Pioneer Petroleum Corp., Tulsa	12,177.10	.....	15,779.52
Peerless Oil Producing Co., Tulsa	8,857.89	.....	17,254.57
Phoenix Oil Co., Pittsburgh, Pa.	25,408.36	.....	41,814.53
Phillips, Waite,* Tulsa	1,677.31	.....	2,878.17
Phillips Petroleum and W. B. Pine, Okmulgee	13,377.38	.....	20,795.30
Phillips Petroleum and W. B. Pine, Okmulgee	.....	5,603	560.34
Pine, W. B., Okmulgee	116,362.53	.....	185,401.92
Pine, W. B., Okmulgee	17,682.63	65,352	33,307.64
Pine, W. B., Okmulgee	1,055.89	79,683	7,129.94
Phillips Petroleum Co., Bartlesville	621,629.78	.....	1,032,961.69
Phillips Oil Co., Chelsea	4,685.71	.....	6,396.96
Phillips, W. G., and J. B. Milam,* Chelsea	2,970.99	.....	4,312.07
Phillips, W. G., and J. B. Milam, Chelsea	38,576.94	.....	52,143.54
Papoose Oil Co. and E. H. Daly and J. A. Swindler, Tulsa	2,954.60	5,670	5,506.46
Papoose Oil Co., Tulsa	139,933.54	295,752	226,854.72
Prairie Oil & Gas Co., Independence, Kans.	4,819,184.82	.....	7,636,630.93
Prairie Oil & Gas Co., Independence, Kans.	.....	614,139	40,546.77
Prairie Oil & Gas Co., Independence, Kans.	C. H. Gas	4,917,507	376,980.71
Pure Oil Co., Chicago, Ill.	1,844,462.26	.....	2,953,335.07
Pure Oil Co., Chicago, Ill.	.....	1,264,479	71,798.24
Pure Oil Co., Chicago, Ill.	Gasoline	516,272	38,642.07
Prod. & Refg. Corp., Independence, Kans.	298,467.10	.....	269,855.11
Prod. & Refg. Corp., Independence, Kans.	.....	278,204	16,440.34
Plains Petroleum Co., Inc., Tulsa	7,962.91	8,416	13,057.25
Petroleum Royalty Corp.,* Tulsa	15,008.33	.....	24,157.66
Petroleum Royalties Co.,* Tulsa	.....	.....	162,100.23
Petroleum Co. and M. H. Mosier, Tulsa	10,400.82	12,442	15,285.91
Petroleum Co., Tulsa	4,360.96	5,746	6,454.91
Petroleum Producers Co., Wichita Falls, Tex.	4,974.07	.....	8,389.67
Petroleum Rights Corp.,* New York City	.....	.....	19,484.30
Pawnee Oil Producing Co., Tulsa	4,239.00	.....	6,691.46
Paraffine Oil Co., Houston, Tex.	7,176.32	.....	9,047.53
Peerless Oil & Gas,* Indiana, Pa.	10,800.92	.....	17,442.95
Peerless Oil & Gas, Indiana, Pa.	.....	Gas	839.10
Paragon Oil Co., Tulsa	4,786.66	4,358	7,761.54
Perpetual Royalty Corp.,* St. Louis, Mo.	.....	.....	11,370.28
Provident Royalties Corp.,* Tulsa	.....	.....	5,375.66
Provident Royalties Corp.,* Tulsa	6,848.71	.....	10,950.20
Plymouth Petroleum Co., Tulsa	8,937.22	.....	12,773.08
Patterson, J. A.,* Wewoka	.....	.....	5,648.77
Putman, P. W.,* San Antonio, Tex.	2,092.53	.....	2,645.63
Pendleton, George C., receiver, Durant	.....	.....	107,547.70
Pohl, A. W. J.,* Brooklyn, N. Y.	.....	.....	2,433.33
Probst, George C., Tulsa	2,796.88	.....	4,443.44
Perry, C. J., and Stella,* Shawnee	.....	.....	2,626.99
Pharoah, O. J.,* Henryetta	.....	.....	9,925.23
Pease, H. A.,* Shawnee	.....	.....	3,442.87
Perkins, J. E.,* Tulsa	.....	.....	3,546.72
Pounder Pomeroy Co.,* Tulsa	2,114.13	.....	3,539.78
Priboth, Lillie M.,* Blackwell	1,949.61	.....	3,536.44
Priboth, F. F.,* Blackwell	1,938.32	.....	3,517.07
Powers, M. F.,* Tulsa	.....	.....	49,378.83
Powers, M. F., and A. I.,* Tulsa	.....	.....	26,932.85
Perkins & Cullum, Wichita Falls, Tex.	9,526.39	.....	13,507.53
Potts, Mable Dale,* Yale	6,662.39	.....	10,518.67
Pinney, Frank M.,* Wynona	.....	.....	14,419.28
Priddy, W. D., Norman	.....	.....	3,439.59
Pepper Oil & Gas,* Oklahoma City	.....	.....	3,422.78
Palmer, S. T.,* Okemah	.....	.....	8,695.28
Price, N. J., and Alpha,* Okemah	.....	.....	5,243.90
Price, F. D., and Arizona,* Okemah	.....	.....	2,080.88
Provident Royalty Corp., Tulsa	.....	.....	2,982.86
Producers Oil Co., Tulsa	13,015.77	.....	20,851.58
Pender & Co., Denton, Tex.	.....	.....	5,148.67
Q			
Quinlan, C. P.,* Tulsa	1,343.23	3,088	2,131.95
Quimby, John,* Montebello, Calif.	.....	.....	6,192.32
R			
Robinson, E. L., Tulsa	3,824.75	.....	5,217.37
Robinson, E. L.,* Tulsa	3,252.21	.....	4,983.32
Robinson, E. L., and Gibson-Zahniser Oil Corp., Tulsa	4,969.13	13,428	8,942.36
Riverland Co.,* Tulsa	1,919.29	.....	2,870.86
Riverland Co., Tulsa	10,106.98	8,823	16,534.37
Riverside Oil & Refining Co., Tulsa	14,888.21	.....	22,232.15
Ramsey & Ramsey Petroleum Corp., W. R. and W. E., Oklahoma City	108,986.15	.....	130,575.10
Ramsey & Ramsey Petroleum Corp., W. R. and W. E., Oklahoma City	.....	93,246	5,226.62
Reserve Petroleum Corp., Tulsa	18,014.42	.....	27,760.06
Reserve Petroleum Corp.,* Tulsa	2,132.22	.....	3,566.69
Regal Oil & Gas, Tulsa	18,986.92	.....	28,114.39
Range Oil Co.,* Okmulgee	.....	.....	2,801.35
Replogle & Johnston,* Oklahoma City	.....	.....	7,803.33

(Continued on next Page)

These 3 features are found only on

W-K-W SAFETY CONES

(FORMERLY "VARCO")

1 The Safety Bushing

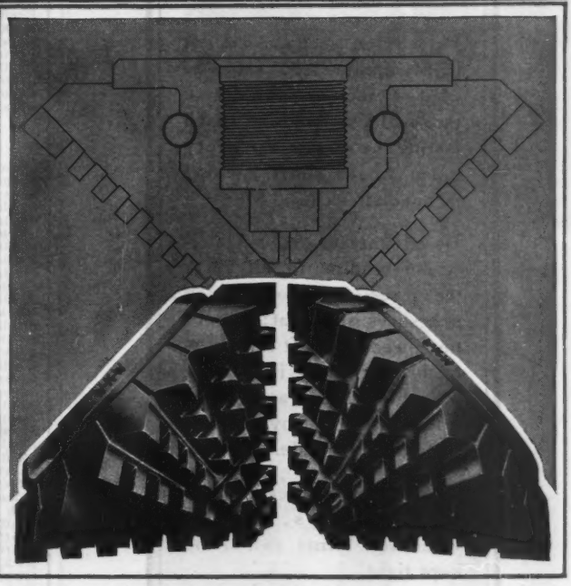
Of the thousands of sets used not one W.K.W. Cone has been left in the hole. The bushing is held to the cone by a piece of alloy steel rod which forms an unbreakable, yet flexible connection.

2 The Ease of Assembly

The exclusive method by which W.K.W. Cones are assembled and removed from the bit entirely eliminates cutting them off, as is so common with other types.

3 The Mounting of Cones

The design of W.K.W. Cones is such that the teeth do not wear out by riding each other. All wear on the teeth comes from contacting formation, and maximum footage is obtained from every cone.



W.K.W. Cones are slush lubricated. The advantages of slush lubrication in the W.K.W. Cones are many, the most important advantage being the elimination of a mechanical lubricator. Time is saved in assembly as it is not necessary to have extra joints of drill pipe with extra connections to take care of a lubricator.

W.K.W. Cones are hard faced. The outside bevels on the cones are stellited, thereby keeping them to gauge much longer than would be possible by merely heat treating.

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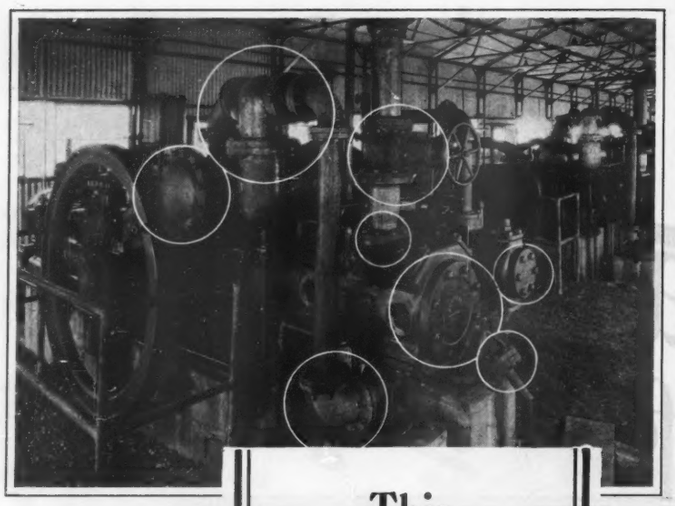
WIEMAN-KAMMERER-WRIGHT CO., INC.

Hollydale [Los Angeles Co] California



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OKLAHOMA GROSS PRODUCTION THIRD QUARTER

Name and address—	No. bbls. oil	M. ft. gas	Amount
Rogers Oil & Gas,* Holdenville	.....	.....	49,375.67
Rogers, B. H.,* Holdenville	.....	.....	8,101.37
Rogers, W. G.,* Ardmore	.....	.....	1,215.69
Rogers, B. H. (special),* Holdenville	.....	.....	12,944.85
Rogers, W. G. (special),* Holdenville	.....	.....	3,616.85
Reiter-Foster Oil Corp., Tulsa	46,385.79	C. H. Gas	73,540.24
Reiter-Foster Oil Corp.,* Tulsa	3,759.56	C. H. Gas	6,014.80
Red Bank Oil Co., Tulsa	12,153.71	1,119	18,262.18
Rena Royalty Co.,* Tulsa	24,934.21	.....	41,726.95
Reynolds Oil & Royalty Co., Okmulgee	17,083.35	.....	28,060.91
Rockland Oil Co., Ardmore	24,872.22	.....	29,761.89
Ryan Consolidated Petroleum Corp., Tulsa	5,469.59	.....	8,372.28
Reliance Oil Co. of Oklahoma, Houston, Tex.	4,582.86	.....	8,729.24
Royalties Management Corp.,* New York City	.....	.....	34,468.07
Rex Oil & Gas, Winchester, Ky.	5,807.78	.....	7,561.35
Ralph, B. B.,* Kansas City, Mo.	.....	.....	4,578.69
Royalty Investment Syndicate,* New York City	.....	.....	2,068.41
Roberts, Thomas C. Roberts, Ardmore	.....	.....	7,239.41
Rogers, Leslie,* Tulsa	6,423.06	5,097	11,241.72
Rogers, Henry C.,* Earlsboro	.....	.....	3,219.43
Rogers, Helen,* Ada	.....	.....	3,219.40
Rogers, Blanch,* Ada	.....	.....	3,219.43
Ryan, Thomas, by E. D. Hall, attorney, Wetumka	.....	.....	7,275.69
Rogers, Patricia,* Ada	.....	.....	3,219.43
Rogers, Harold,* Ada	.....	.....	3,219.44
Rogers, Eston,* Ada	.....	.....	3,219.44
Rogers, Rosa, Calloway and,* Earlsboro	.....	.....	44,559.87
Reed & Harmon, Nowata	4,687.34	.....	6,454.88
Reed, Isabelle S.,* Neosho, Mo.	13,697.10	.....	23,873.54
Reed, Frank H., Neosho, Mo.	.....	.....	32,348.42
Reed, Frank and Isabelle, Neosho, Mo.	.....	.....	3,881.00
Reed, Frank and Isabelle,* Neosho, Mo.	45,670.01	.....	67,458.29
Roth, C. E., Independence, Kans.	4,811.13	.....	6,852.18
Rouse, Scott,* Enid	.....	.....	2,630.44
Roberts, George D., Tulsa	.....	.....	6,808.63
Rutz, Jake, Oil Co., Morris	.....	.....	11,003.39
Ray, Joe, Chickasha	8,528.46	.....	11,962.32
Ray, Joe,* Chickasha	.....	.....	3,360.76
Rainey, J. W.,* Oklahoma City	.....	.....	27,236.79
Russell, Dora C.,* Duncan	.....	.....	2,198.57
Rockwell, J. A.,* Warren, Pa.	.....	.....	9,017.77
Reinhart, C. H., Chelsea	3,410.07	.....	5,209.21
Rone, J. L. and Sudie,* Walters	.....	.....	2,374.82
Randall, W. S., Oklahoma City	4,882.72	.....	5,060.57
Robertson, B. H., Nowata	4,154.76	.....	5,949.27
Rutledge, C. S.,* Maud	.....	.....	2,245.49
Rutts, Leonard C.,* Tulsa	.....	.....	4,034.37
Richards, C. L., Tulsa	5,535.43	.....	6,416.94
Robins, J. W.,* Fort Worth, Tex.	6,604.84	.....	7,918.38
Reade, C. M. and Mary,* Mexico, Mo.	.....	.....	2,509.26
Rockwell, J. A.,* Warren, Pa.	.....	.....	6,939.23
Regan, L. C.,* Tecumseh	.....	.....	2,645.83
Robinson, Philo C., guardian,* Los Angeles, Calif.	.....	.....	2,243.94
Routt, J. S.,* Okmulgee	8,796.58	.....	14,168.91
Replogle, Jamie,* Oklahoma City	.....	.....	5,810.08
Replogle, D.,* Oklahoma City	.....	.....	3,086.03
Royalty Corp. of America,* Tulsa	52,822.80	.....	85,256.89
S			
Simms Oil Co., Dallas, Tex.	435,984.86	35,086	738,783.98
Simpson-Fell Oil Co., Ardmore	25,333.81	.....	30,965.17
Snowden & McSweeney Co., New York City	33,002.80	76,505	45,789.28
Sinclair Oil & Gas, Tulsa	4,311,175.60	.....	6,754,580.30
Sinclair Oil & Gas, Tulsa	.....	Gas	179,468.09
Sinclair Oil & Gas for Amerada Petroleum, Tulsa	.....	.....	6,479.56
Sinclair Oil & Gas,* Tulsa	.....	.....	7,679.27
Sinclair, H. F.,* New York City	.....	.....	9,951.78
Sinclair Crude Oil Purchasing Co., Tulsa	15,673.84	.....	22,745.54
Sinclair Crude Oil Purchasing Co. (suspense) Tulsa	3,358.67	.....	4,874.05
Sinclair Crude Oil Purchasing Co.,* Tulsa	9,738.93	.....	15,010.59
Sinclair Crude Oil Purchasing Co.,* Tulsa	.....	.....	80,259.72
Sinclair Crude Oil Purchasing Co. (suspense),* Tulsa	.....	.....	117,475.50
Southland Royalty Co.,* Ponca	.....	.....	67,457.67
Shasta Oil Co., Wichita Falls, Tex.	42,274.61	.....	59,881.96
Sterling Oil & Gas, Tulsa	6,402.03	.....	9,091.06
Savoy Oil Co., Tulsa	7,491.56	.....	9,567.63
Savoy Oil Co., Tulsa	.....	2,784	175.96
Skelly Oil Co., Tulsa	785,497.62	.....	1,154,961.23
Skelly Oil Co., Tulsa	.....	2,183,163	70,591.86
Skelly Oil Co.,* Tulsa	9,526.09	9,150	14,598.97
Skelly Oil Co. for Cassidy heirs, Tulsa	3,816.83	.....	5,652.98
Skelly, W. G., Oil, Tulsa	3,336.41	.....	3,780.68
Silurian Oil Co., St. Louis, Mo.,	121,472.45	.....	176,191.79
Silurian Oil Co., St. Louis, Mo.	.....	74,505	4,647.01
Sarasota Oil Co.,* Ardmore	3,224.75	.....	3,817.97
Slab Oil Co., Ardmore	11,228.11	11,990	19,601.38
Shaffer Oil & Refining Co., Tulsa	349,684.89	.....	558,101.62
Shaffer Oil & Refining Co., Tulsa	.....	C. H. Gas 528,113	18,921.82
Shaffer Oil & Refining Co., Tulsa	.....	291,984	22,952.72
Slick, T. B., Clarion, Pa.	391,525.52	.....	593,522.16
Slick, T. B., Clarion, Pa.	.....	15,548	1,371.22
Slick, T. B.,* Clarion, Pa.	59,396.15	.....	94,307.75
Slick, T. B.,* Clarion, Pa.	.....	33,747	4,821.97
Sands Petroleum Corp., Tulsa	10,247.80	.....	28,107.77
Southwest Gas Utilities Corp. of Oklahoma, Ada.	.....	146,637	5,490.54
Seneca Royalties Co.,* Oklahoma City	2,089.53	.....	3,390.80
Sun Royalty Co.,* Tulsa	20,435.45	.....	31,610.23
Sunray Oil Co., Tulsa	29,932.86	.....	43,165.31
Sure Oil Corp., Tulsa	4,043.14	2,763	6,029.64
Shoreline Oil & Gas., Tulsa	13,325.21	.....	20,615.68
Standard Royalties Wewoka Corp.,* New York City	.....	.....	3,407.68
Shell Petroleum Corp., St. Louis, Mo.	1,935,129.48	.....	3,033,009.26
Shell Petroleum Corp., St. Louis, Mo.	.....	3,451,169	136,846.33
Shell Petroleum Corp. (Sundry Debtors), St. Louis, Mo.	4,803.46	.....	6,691.34
Seminole Royalty Co.,* Oklahoma City	2,743.22	.....	4,209.03
Selby Oil & Gas, Tulsa	110,674.47	15,359	133,585.14
Selby Oil & Gas,* Tulsa	2,729.45	.....	4,469.65
Sooner Oil & Gas, Sapulpa	.....	.....	5,728.00
Skelton, L. S., estate,* Okmulgee	.....	.....	5,365.89
Schonwald, Morris,* Oklahoma City	.....	.....	2,002.16
Schonwald, Harold,* Oklahoma City	.....	.....	4,521.65
Schonwald, Dave,* Oklahoma City	.....	.....	3,480.20
Southwest Production, Bristow	.....	232,343	18,966.18
Schermerhorn, J. B., Minneapolis, Minn.	2,954.30	.....	4,017.53
Schermerhorn, J. B., Inc., Minneapolis, Minn	60,723.46	.....	80,606.15
Schermerhorn-Ardmore Co., Minneapolis, Minn.	89,469.24	20,509	102,149.91
Schermerhorn Oil Co., Minneapolis, Minn.	3,287.54	118,099	13,036.94
Signal Oil Co., Tulsa	68,172.36	.....	105,074.03
Sheridan Oil Co., Tulsa	13,572.08	6,265	19,997.08
Sneed Royalty Co.,* Tulsa	13,449.02	.....	21,180.57
Sturm Drilling Co., Ardmore	14,122.23	.....	18,891.98
Sturm, H. L., receiver for E. M. Boring, Ardmore	11,660.36	.....	16,248.52
Smith, J. A.,* Konawa	.....	.....	2,588.33
Smith, Marie S., Ardmore	.....	6,736	510.12
Smith, Marie S., Ardmore	7,579.68	.....	10,460.63
Smith, Will H., Ardmore	4,462.98	2,870	6,006.91
Smith, Charles R., Jr., Ardmore	6,175.79	5,548	8,884.83
Smith., C. R., estate, Ardmore	3,571.96	.....	4,960.07
Smith, Terry G.,* San Diego, Calif.	.....	.....	2,339.29
Smith, R. Earl,* Blackwell	.....	.....	2,622.76
Smith, Leona,* Blackwell	.....	.....	2,622.76

(Continued on next Page)

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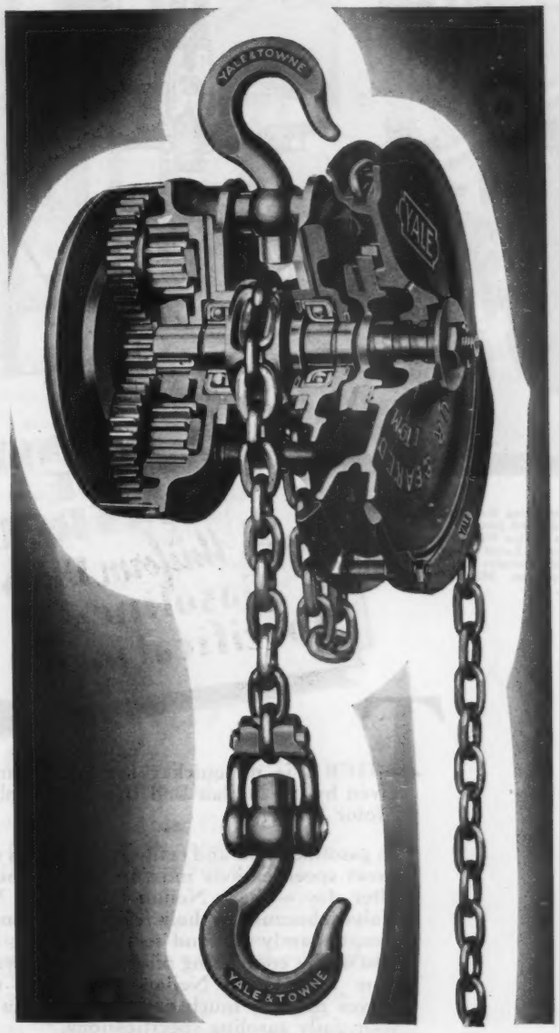

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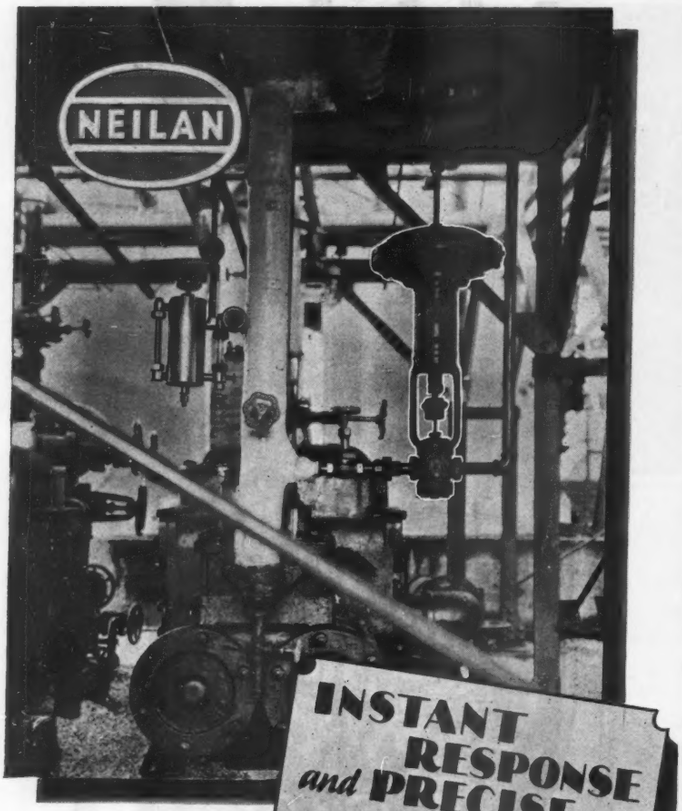

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HOUSTON, *1400 Conti Street* . Maintenance Engineering Corp.

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OKLAHOMA GROSS PRODUCTION THIRD QUARTER

Name and address—	No. bbls. oil	M. ft. gas	Amount
Smith, Steve,* Blackwell	.....	.....	2,622.76
Smith, N. Bert,* Royalty Trust, Oklahoma City	.....	.....	11,800.95
Smith, N. Bert,* Oklahoma City	.....	.....	8,357.98
Sparks, L. O., Admr.,* Oklahoma City	16,105.19	.....	25,943.29
Sparks, Harriett W.,* Shawnee	.....	.....	7,127.40
Snedden, George W., Tulsa	31,912.58	.....	51,168.97
Sowards, Fred and Willard,* Stroud	.....	.....	2,688.29
St. Germain, R. J., Tulsa	.....	.....	3,689.67
Schmidt, H. E.,* Columbus, Ohio	.....	.....	5,456.05
Streck, Jennie E.,* Hennessey	.....	.....	8,681.70
Sporleder, William,* Okemah	5,150.39	.....	8,228.75
Shimp, Ira,* Blackwell	.....	.....	10,477.34
Shade, R. S.,* Tulsa	.....	.....	2,120.45
Shirley, Gracie I. and H. L.,* Tulsa	.....	.....	3,171.88
Smelser, R. S.,* Mannford	.....	.....	2,427.45
Steinpfad, R. A. and Nina B.,* Shawnee	.....	.....	3,604.60
Scott, Mrs. Lucy B.,* Holdenville	1,536.26	.....	2,879.78
Sawyer, A. H.,* New York City	.....	.....	5,543.94
Snyder, Charles A.,* Sapulpa	.....	.....	2,052.06
Shepherd, Dan., Gdn.,* Shawnee	.....	.....	11,297.23
Shepherd, J. D.,* Shawnee	.....	.....	18,616.55
Surber, O. B.,* Cherokee	.....	.....	2,354.08
Sowards, Fred and Willard,* Stroud	.....	.....	2,316.82
Saugster, Joe B.,* Earlsboro	.....	.....	2,539.77
Simons, I. S., Tulsa	3,616.14	.....	5,381.67
Simon, G. A.,* Tulsa	1,656.08	.....	2,818.24
Sawyer, A. H.,* New York City	.....	.....	2,085.93
Stekoll, Harry, Tulsa	14,031.79	.....	20,696.38
Seger, C. H., Tulsa	12,950.62	13,704	20,388.37
Spencer, Alice and T. J.,* Wewoka	.....	.....	5,706.04
Stamper, Jennie, Admrx.,* Oklahoma City	.....	.....	12,417.33
Stamper, Jennie,* Oklahoma City	.....	.....	12,417.33
Selby, J. L., Muskogee	.....	.....	5,070.19
Sessions, Leigh J., Corp.,* New York City	.....	.....	4,160.00
Stegall, J. F.,* Shawnee	.....	.....	4,062.33
Sharp, Robert C., Tulsa	4,437.20	.....	7,022.90
Spring, Earl,* Ryan	.....	.....	3,222.35
Shields, W. J.,* Fort Worth, Tex.	.....	.....	9,719.20
Summers, Mrs. George M.,* Tonkawa	.....	.....	3,023.15
Summerfield, Joseph, Sr.,* Memphis, Tenn.	.....	.....	2,869.46
Summerfield, Moses A.,* Memphis, Tenn.	.....	.....	2,869.48
Sidwell Drilling Co., Sapulpa	4,066.05	.....	6,163.66
Sykes, C. E.,* Ardmore	.....	.....	3,437.24
Greer, J. C., trustee for Louise Strother,* Martinsville, Va.	.....	.....	8,682.19
Snowden, Pearl M.,* Tulsa	.....	.....	2,472.15
Sharum, B. E.,* Ripley	.....	.....	2,007.23
Sampson Oil Co., Tulsa	4,516.36	14,381	6,536.63
Spielberger, W. P.,* Tulsa	.....	.....	2,124.33
Stewart, William E.,* Wellsville, N. Y.	.....	.....	2,788.50
Simpson, J. R. and Lou,* Duncan	.....	.....	3,285.20
Simpson, A. O.,* Ardmore	1,610.83	.....	2,663.15
Simpson, W. E.,* St. Louis, Mo.	.....	.....	2,663.15
Shaffer, C. B., Chicago, Ill.	34,024.41	.....	42,870.17
Snell, Katie, nee Brown,* Dustin	.....	.....	3,422.81
Snell, R. E., Jr.,* Dustin	.....	.....	2,013.81
Skelton-Moore Oil Co., Bartlesville	4,949.67	.....	6,915.12
Stuart, Phil N.,* Shawnee	.....	.....	3,632.71
Stewart, C.,* Muskogee	.....	.....	9,877.46
Smith, G. J., Tulsa	.....	.....	12,134.00
Simpson, Susan A.,* Tulsa	.....	.....	8,669.24
Seay, Clyde W.,* Oscar	.....	.....	7,844.91
Standard Royalties of Canada, Inc.,* Toronto, Canada	.....	.....	182,564.51
Standard Royalties of Canada, Inc., Toronto, Canada	.....	Gas	5,822.19
Sparks, O. S.,* Ardmore	.....	.....	2,081.75
Superior Oil Corp., Tulsa	207,847.51	.....	315,151.77
Superior Oil Corp., Tulsa	.....	458,408	23,301.47
Sapulpa State Bank,* Sapulpa	.....	.....	18,882.24
Swindler, James A., Muskogee	.....	.....	8,512.02
Schmidt, H. E.,* Columbus, Ohio	.....	.....	9,262.11
Sandlin, P. M. and G. L.,* Henryetta	.....	.....	2,594.84
T			
Talbot, W. G.,* Oklahoma City	.....	.....	12,037.67
Transcontinental Oil Co., Tulsa	89,926.31	.....	127,087.25
Transcontinental Oil Co., Tulsa	.....	213,741	14,383.47
Transcontinental Oil Co., suspense, Tulsa	.....	.....	1,642.12
Twin State Oil Co., Tulsa	620,798.75	.....	743,347.37
Twin State Oil Co., Tulsa	.....	Gas	37,437.32
Twin State Oil Co.,* Tulsa	6,551.16	.....	10,841.44
Tidal Oil Co., Tulsa	609,407.69	.....	894,117.74
Tidal Oil Co., Tulsa	.....	Gas	30,927.64
Tidal Oil Co., for partners, Tulsa	8,491.42	.....	10,633.29
Tidal Oil Co.,* Tulsa	8,058.01	.....	10,593.36
Tidal Oil Co.,* Tulsa	.....	.....	743.15
Tidal Oil Co., paid for Cherokee Warren Oil & Gas	8,387.50	.....	10,483.59
Texola Oil Co., Oklahoma City	9,107.28	.....	14,512.94
The Texas Company, Tulsa	1,033,595.70	.....	1,533,730.71
The Texas Company, Tulsa	.....	Gas	130,266.87
The Texas Company,* Tulsa	7,590.74	.....	12,868.43
Thlocco Oil Co., Tulsa	9,425.03	.....	16,017.25
Turman Oil Co., Tulsa	5,297.54	.....	7,623.54
Texworth Securities Corp.,* Brooklyn, N. Y.	.....	.....	5,585.73
Tiger Mountain Oil Co., Tulsa	4,276.40	.....	6,056.43
Travis, Sarah Leola, Dover	.....	.....	8,734.19
Turner, K. B.,* Eufaula	.....	.....	2,368.66
Townsend, M. T.,* Ada	.....	.....	6,183.96
Tibbens, C. G., (2 quarters of 1929), Tulsa	62,004.68	.....	79,858.30
Thompson, S. F.,* Okemah	.....	.....	3,533.24
Thomas, G. M., Norman	.....	.....	3,412.09
Thomas, Rufus S.,* Purcell	.....	.....	14,011.28
Towes, A. W., Crisfield, Md.	.....	.....	4,985.53
Thornton, David P., Muskogee	.....	.....	2,691.80
Gilbert, N. T., and Joseph G. Glass, receivers for Turman Oil Co.	153,168.08	223,845	265,943.35
Tucker, F. E.,* Ardmore	.....	.....	2,889.84
Tate, J. M., Jr., trustee for Pittsburgh Royalty Syndicate, Pittsburgh, Pa.	.....	.....	2,724.35
Tull, Vida M., Oklahoma City	6,559.68	.....	11,731.65
Talley, T. F., and Cynthia,* Sulphur	.....	.....	5,465.16
Taylor, H. H., Tulsa	.....	.....	69,786.83
Taylor, Dr. Joseph C.,* New York, N. Y.	.....	.....	7,233.88
Templeton, M. E.,* Phoenix, Ariz.	.....	.....	19,138.00
Tomlinson, John H.,* Tulsa	.....	.....	2,872.47
U			
Umburn, W. L., Weleetka	.....	.....	16,454.72
Umburn, Gilia, Weleetka	.....	.....	10,720.98
United Royalty Corp.,* Kansas City, Mo.	.....	.....	2,557.90
U. S. Royalties Corp.,* New York, N. Y.	10,391.76	13,708	17,072.44
Urbansky, Virgie and Joseph,* Oklahoma City	.....	.....	3,552.15
United Eight Oil Trust, by H. B. Fell, receiver, Ardmore	8,082.83	.....	12,498.10
Utilities Production Corp., Tulsa	.....	665,525	31,876.25
V			
Valley Osage Oil Co., Tulsa	20,268.54	.....	27,706.62
Vacuum Oil Co., Houston, Tex.	100,909.33	326,068	174,057.40
Voorhees, Leon G.,* Oklahoma City	10,106.56	15,688	13,805.58
Vennex Oil and Keystone Production Co., Wichita Falls, Tex.	91,765.13	.....	119,513.84
Viersen, R. W.,* Okmulgee	.....	.....	4,116.14
Viersen, A. A.,* Okmulgee	.....	.....	3,923.70
Viersen, A. A.,* Okmulgee	10,642.64	.....	17,134.98

(Continued on next Page)

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OKLAHOMA GROSS PRODUCTION THIRD QUARTER

Name and address—	No. bbls. oil	M. ft. gas	Amount
Viersen Oil & Gas, Okmulgee	768.97	394	1,358.24
Viersen Oil & Gas, Okmulgee	16,475.44	.....	25,737.55
Viersen, Sam K., Okmulgee	.....	1,376	137.64
Viersen, Sam K.,* Okmulgee	5,419.87	.....	8,795.66
Voyles, R. E., Pawhuska	.....	.....	5,555.26
Vance, S. E.,* Tulsa	2,258.86	.....	4,314.73
Vassar, Amanda,* Tulsa	1,858.78	.....	3,380.78
Varnum, Eliza P.,* Shawnee	7,849.92	.....	12,996.24
Varnum, W. F.,* Shawnee	12,764.35	.....	17,953.58
Vernon Oil & Gas, Blackwell	6,452.21	.....	10,684.32
W			
Winona Oil Co. of Delaware, Tulsa	11,360.60	.....	19,885.32
Winona Oil Co. of Delaware, Tulsa	8,596.17	.....	12,124.45
Winona Oil Co. of Delaware, Tulsa	18,575.20	.....	26,489.25
Warner-Caldwell Oil Co., Titusville, Pa.	24,322.44	.....	32,372.24
Warner-Caldwell Oil Co., Titusville, Pa.	.....	Gas	1,695.61
Wiser Oil Co., Sisterville, W. Va.	93,297.28	.....	123,316.69
Wittmer Oil & Gas Properties, Pittsburgh, Pa.	4,139.40	.....	7,051.87
Wolverine Petroleum Corp., St. Louis, Mo.	173,289.72	.....	235,771.63
Wolverine Petroleum Corp., St. Louis, Mo.	.....	288.125	17,623.68
Washington Royalties Co.,* Bartlesville	7,272.00	.....	11,863.50
Wilcox, H. F., Oil & Gas, Tulsa	291,949.25	.....	435,098.66
Wilcox, H. F., Oil & Gas, Tulsa	.....	Gas	13,968.09
Wilcox, H. F., Oil & Gas (suspense), Tulsa	.....	.....	4,174.61
Whitehill, Howard J., and H. C. Weible, Tulsa	11,342.16	.....	15,569.66
Whitehill Oil Corp.,* Tulsa	1,778.77	.....	2,656.47
Whitehill Oil Corp., Tulsa	14,281.02	.....	18,888.58
Wood, Roy,* Oklahoma City	.....	.....	25,722.26
Woodsworth, W. W.,* Ringling	.....	.....	4,983.39
Wheeler, John W.,* Oklahoma City	.....	.....	3,645.86
Winkler & McQueen, Inc., Duncan	14,677.36	.....	13,786.79
Windler, Louis,* Enid	.....	.....	2,153.06
Wilmott, John W.,* San Diego, Calif.	.....	.....	29,601.47
Wallace, J. E., Okmulgge	.....	.....	18,399.36
Weeks, Margaret S., Ardmore	6,175.78	.....	8,884.71
Wells, Ira G.,* Holland Patent, N. Y.	.....	.....	2,496.71
Welsh, Carrie B.,* Blackwell	1,768.98	.....	3,007.26
Welsh, J. L.,* Blackwell	.....	.....	3,064.00
Watson, J. F.,* Brownsville, Tex.	.....	.....	2,281.37
Work, W. F.,* Wewoka	.....	.....	2,326.47
Ward, H. Z.,* Heavener	3,805.44	.....	4,418.09
Worley, Wilhelmina,* Tulsa	.....	.....	2,387.84
Walker, E. A.,* Oklahoma City	19,472.44	.....	26,472.44
Wigton & Long Co., Okmulgee	.....	.....	4,900.16
Wilson, Benton,* Greenfield, Mo.	.....	.....	5,278.99
Wallace, W. L.,* Shawnee	.....	.....	3,331.22
Watson, A. T., Nell Evans and, Bristow	.....	.....	3,412.32
Witwer, L. H.,* Tulsa	.....	.....	2,175.73
Wilborn, S. A.,* Sulphur	.....	.....	13,067.99
Walsh Oil Co., Tulsa	7,468.29	.....	5,543.54
Wolcott, C. W.,* guardian, Coweta	.....	.....	3,460.16
Whitney, E. W.,* Wewoka	.....	.....	14,838.67
Watson, Sims,* Ivanhoe, Tex.	.....	.....	3,767.70
Witwer, L. H.,* Tulsa	.....	.....	2,586.51
Warren Royalties, Inc., by Frank W. Miller, trustee,* Newark, N. J.	.....	.....	6,041.66
Wrightsman Petroleum Co., Tulsa	95,180.73	.....	160,026.25
Western States Royalty Co.,* Great Falls, Mont.	.....	.....	4,370.25
Western Oklahoma Gas Co., Fort Smith, Ark.	.....	52,646	5,264.60
Westland Oil Corp., Tulsa	72,071.70	76,952	113,869.83
Wellsville Oil Co., Wellsville, N. Y.	10,599.86	.....	14,344.13
Wentz, L. H., Oil Division, Ponca City	140,178.28	229,163	249,106.75
Wentz, L. H., Oil Division, Ponca City	.....	.....	5,450.96
White Eagle Oil & Refining, Wichita, Kans.	32,160.22	15,896	52,596.21
Wright, J. H., estate, Sapulpa	13,659.31	.....	21,330.77
Wright, James,* Bristow	.....	.....	4,205.65
Wright, Archie K.,* Muskogee	.....	.....	3,149.11
Woods, W. E.,* Cox City	2,392.41	.....	3,524.22
Wood, Emmett,* Maud	.....	.....	42,620.33
Wood-Gilbert-Wood Syndicate No. 1, Oklahoma City	.....	.....	13,149.37
Wood Oil Co., Tulsa	.....	.....	10,960.66
Wilson, Irvin F.,* Wewoka	.....	.....	6,917.55
Westheimer & Daube,* Ardmore	16,723.64	.....	22,678.86
Westheimer & Daube, Ardmore	165,996.60	.....	235,756.66
Westheimer & Daube, Ardmore	.....	Gas	4,084.46
Westerly Oil Co., Bartlesville	4,357.71	.....	6,771.80
Watchorn Oil & Gas, Oklahoma City	9,183.44	.....	12,856.81
Walker, W. Frank,* Tulsa	3,068.79	.....	3,402.22
Woodruff, Ida Belle,* Ardmore	1,882.99	.....	2,133.00
Y			
Youngblood, L. S., trustee,* Wewoka	.....	.....	8,852.00
York Petroleum Co.,* Muskogee	20,481.63	.....	32,542.86
Youts, Elmer H., Shawnee	.....	.....	20,395.14
Young, L. W.,* Oklahoma City	.....	.....	9,878.27
Yowitz, Frank,* Broken Bow	.....	.....	2,552.47
Z			
Zimmerman, L. W., Chicago, Ill.	21,396.54	.....	24,270.00

New Locations

(Continued from Page 159)

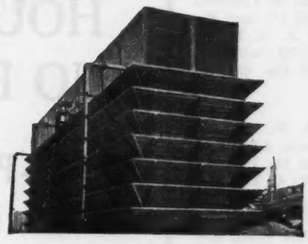
corner of its lease "W" out of Section 32, Block 4, H.&T.C. Survey. Same corporation's No. 21 Waggoner-W, 165 feet north and 500 feet east of the southwest corner of its lease "W" out of Section 32, Block 4, H.&T.C. Survey. Same corporation's No. 1 Waggoner-II, 1,320 feet north and 150 feet east of the SW cor., Section 41, M.E.P.&P. Survey. Shaw Oil Co.'s No. 7 Waggoner-E, 150 feet north and 450 feet west of the SE cor. NE, Section 18, Block 4, H.&T.C. Survey. Staley-Wynne & Co.'s No. 17 Waggoner-G, 150 feet south and 200 feet west of the NE cor. S half of W half SE, Section 32, Block 4, H.&T.C. Survey. The Texas Company's No. 366 Waggoner, 330 feet north and 1,490 feet west of the SE cor., Section 7, Block 13, H.&T.C. Survey. Same company's No. 367 Waggoner, 250 feet south and 1,943 feet west of the southeast corner of the A. R. Leatherberry Survey, A-2,020, and located in Section 16, Block 13, H.&T.C. Survey. Zenith Oil Co.'s No. 1 Waggoner, 150 feet north and west of the SE cor. NW SE, Section 101, Block 14, H.&T.C. Survey.

Winkler County

Humble Oil & Refining Co.'s No. 2 J. B. Walton-B, 2,310 feet south and east of the NW cor., Section 47, Block 26, School Land. Sun Oil Co.'s No. 2 George Sealy, 2,310 feet south and 330 feet east of the NW cor., Section 52, Block F, Gunter & Munson, Maddox Brothers and Anderson Survey.

Young County

E. G. Christie's No. 1 Waddell & Hammond, 150 feet south and 1,304 feet west of the northeast corner of the south 203 acres of Section 83, T.E.&L. Survey. Gose & Waggoner's No. 1 J. M. Inman and others, 150 feet north and 1,300 feet east of the most southerly southwest corner of the S. McKimbs Survey, A-493. Holbrook & Wood's No. 6 Dean, 150 feet north and 450 feet west of the SE cor., Section 19, Young County School Land, A-1,284. C. A. Pennell and others' No. 1 J. P. Logan, 150 feet north and east of the SW cor. NE, Section 24, Young County School Land, A-1,284. Smith & Chandler and others' No. 1 F. Loftin, 150 feet north and 450 feet east of the SW cor. NE, Section 2, C.T.R.R. Survey. United Production Co.'s No. 4 A. M. Kunkel and others, 1,050 feet north and 450 feet east of the southwest corner of its 63.8-acre lease out of the G. W. Stell Survey, A-256. D. L. Wolf's No. 1 R. E. Hill, 1,103 feet south and 1,550 feet west of the NE cor., Section 195, T.E.



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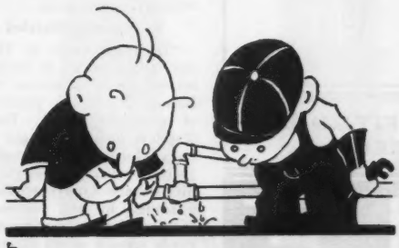

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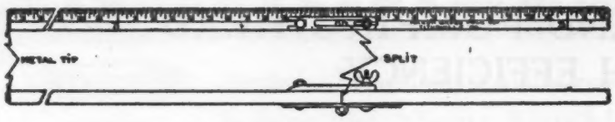

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&L. Survey. Imperator Oil Co.'s No. 1 G. R. White, 300 feet north and east of the southwest corner of the G. R. White 112-acre tract out of the M. E. Criswell Survey, A-1,772. Pandem Oil Co. and Jacob Oil & Gas Co.'s No. 1 A. A. Morrison, 155 feet north and 1,879 feet west of the southeast corner of the W. W. James Survey, A-1,812.

Corrections

In Eastland County: S. A. Hopkins and others' No. 1 S. A. Davis, 1,005 feet north and 330 feet west of the SE cor. N half, Section 54, Block 4, H.&T.C. Survey.

In Howard County: Ward Oil Co.'s No. 20 D. Roberts, 1,770 feet north and 2,190 feet east of the SW cor., Section 137, Block 29, W.&N.W.R.R. Survey.

In Ector County: Humble Oil & Refining Co. and others' No. 1 Kloh-Rumsey-D, 371 feet north and 2,640 feet east of the SW cor., Section 7, Block 44, T-3-S, T.&P. Survey.

In Pecos County: McMan Oil & Gas Co.'s No. 3 Mrs. M. A. Smith-C, 1,650 feet north and 1,890 feet west of the SE cor., Section 25, Block 194, G.C.&S.F. Survey.

In Upton County: Texas Pacific Coal & Oil Co. and Humble Oil & Refining Co.'s No. 1 J. H. Shirk, 425 feet north and 405 feet west of the SE cor., Section 1, Block 3, M.K.&T. Survey.

In Wichita County: Sheldon-Lowry-Prichard & Bolding's No. 1 S. P. Gibson, 150 feet north and west of the SE cor., Section 302, Waggoner Colony Subdivision.

In Wilbarger County: Fain-McGaha Oil Corp.'s No. 3 W. T. Waggoner-DD, 150 feet north and 150 feet east of the SW cor. S half NW, Section 39, M.E. P.&P. Survey.

MOTOR COACH DEMANDS INCREASE GASOLINE—OILS

(Continued from Page 154)

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"More than 300 electric railway companies in the United States and Canada are now operating approximately 10,700 motorcoaches covering more than 20,000 route miles in conjunction with their rail service. Some fifty additional companies have entirely replaced their electric-car service, using more than 500 motorcoaches for this purpose. The motorcoaches owned by all these companies were operated an aggregate of 300,000,000 miles during 1928 and carried more than 1,000,000,000, passengers.

Sparsely Settled Districts

"In some cases in the railroad field the motorcoach is limited to sparsely settled districts where there is not sufficient traffic to justify the operation of passenger trains. But in some other districts local passenger service can best be performed by motorcoaches in conjuction with express train rail service. Motorcoach transportation should be encouraged by the railroads whenever it fulfills the public need, and the railroads should adopt it whenever it offers the most economical method of transportation. If the public prefers to ride on rubber it will do so, although in some cases part of the price it must pay must be a reduction in rail service. Some of our railroads are endeavoring to direct the public's riding habits along economic lines, supporting independent highway transportation lines in their legitimate field but not hesitating to provide their own motorcoach service where it has proved to be the transportation tool that best meets the requirements.

Railroad Use

"The railroads are using motorcoaches in several ways, the most important of which are:

In replacement of local train service.

As additional service auxiliary to local train service.

As additional feeder service to make local stops between zone points of fast trains.

As feeder lines.

In carrying employes to and from railroad shops.

(Continued on next Page)

HOUGH DUO PUMP

A TWO-PURPOSE PUMP without a Flaw—

Just try one DUO PUMP where excessive sand is present and check its performance carefully—and your future requirements will, of course, under similar circumstances, call for the Duo. Will you make the test?

THE CHARLES N. HOUGH MFG. CO.
Franklin, Penna.

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Products That Cut Down Your Underground Overhead

The HIGHER STANDARD

DO you remember the costly delays and fishing jobs caused by broken jars of the old type? The jars that failed at the welds?

Revolutionary were the new and higher standards set by Spang (patented) Weldless Jars.

Today, in all fields, on all tools, Spang Weldless Jars are standard equipment. Out and out predominance like this does not come by accident. Spang Weldless Jars out-drill, out-fish, out-serve any jar ever made.

SPANG & COMPANY
Butler, Pa.

SPANG

WELDLESS JARS

Gott
Water Cans & Coolers
Gott
. . . Have a cool supply of clean-pure sparkling water . . . ready to drink at all times. No matter where you are the GOTT Water Can is health insurance. Your supply store has them.
GOTT Water Cans 1½ gal; 3 gal; 5 gal; and 10 gal.
GOTT Water Coolers 3 gal; 5 gal; 8 gal; 10 gal; and 20 gal.
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H. P. GOTT MFG. CO. · Winfield, Kansas
KEEP PURE DRINKING WATER ALWAYS HANDY

A Meter for Every Kind of Service
EMCO - IRONCLAD WESTINGHOUSE
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Also manufacturers of Gas Regulators
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Simplex Jacks
for Oil Field Service and Every Type of Industry
including Utilities · Railways · Mining · Contractors · Pole Pulling · Pipe Pushing · Cable Reel Jacks · Simplex Screw Jacks - with the Visible Screw.
Distinctive in Man Power, Safety & Simplicity.
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The World's Largest Manufacturers of Jacks

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THE AMERICAN WELL WORKS
General Offices AURORA, ILLINOIS and Factory

As train-connection service in terminal cities, as in New York City.

In touring service to summer resorts, national parks, and so forth.

"Services of the types mentioned have been furnished by the railroads for some years. Train connection is best exemplified by the operation of the Baltimore & Ohio Railroad motorcoaches, which take passengers from the company's rail terminus direct to hotels or motorcoach stations in the heart of New York City and Brooklyn. Notable examples of touring service are the services of the Boston & Maine, Santa Fe, Union Pacific and other railroads to resorts and national parks. In general, the railroads have found it best to conduct their motorcoach operations themselves, or through contract with existing motorcoach operators, or through a subsidiary company organized by the railroad company. Operation by a subsidiary company has become very popular and is the most general practice.

"The steam and electric railroads are making money in two ways by using motorcoaches; first, by reducing losses on unprofitable train operations and second, through actual increase of passenger revenue from motorcoach lines acting as feeders and supplementary to long-distance rail service. An exceptional case is one in which a steam railroad is saving more than $25,000 per year where one motorcoach replaced a daily train. The railroad companies' solution of the short haul passenger-service problem in many places is to give motorcoach service by buying out independent motorcoach lines, by contract, or through a stock partnership in well organized motorcoach companies that are rendering a necessary and convenient transportation service in their territories.

Number of Coaches

"At present 23,300 companies, including independent operators as well as electric and steam-railroad companies are operating such service. During 1928 motorcoaches of these companies carried more than 1,793,000,000 passengers. Obviously the development of so vast a system of transportation is certain to have its effect upon the steam and electric railways. Since motorcoach traffic reached a great volume in 1925 passenger traffic on the railroads has steadily declined. This is due largely to the private automobile, as only a small portion of the railroad traffic was lost to the motorcoach. The number of motorcoaches operated by steam railroads increased from scarcely 200 at the end of 1924 to more than 1200 in 1929 and now more than sixty-two railroads maintain motorcoach service. The Electric railway industry was not so slow to adopt this form of transportation, and already more than fifty per cent of our electric railways operate motorcoaches.

"To operate a small local train one mile costs approximately $1.25 as compared with 25 or 30 cents per mile for the motorcoach. For the railroad, these are out-of-pocket costs only and do not include fixed charges, roadbed maintenance and the like. Thus the ratio is not far from five to one in favor of the motorcoach. For a steam train the average fuel cost is 23 cents per mile, while for the motorcoach it is 3 cents per mile. Wages per mile for the motorcoach are 4 cents as compared with 28 cents for the train. The Boston & Maine Railroad found that the cost per mile of operating a steam passenger train, without any charge for roadbed or rail maintenance was $1.59; of rail cars 72 cents; and of motorcoaches 29 cents.

"Real progress has already been made in applying the motorcoach to railroad requirements, and the railroad officials from high to low are earnestly striving to properly co-ordinate the two transportation facilities."

OIL STRUCK IN BULGARIA

Oil gushers have come in in Varna, Bulgaria, revealing the existence of petroleum deposits in this Black Sea section. The government is also making borings in Tzirpan, Dalny, Kadretzy and Kazanlin.

Delta No. 10

LIST PRICE COMPLETE $2.75 LESS BATTERIES

ELECTRIC LANTERN

Oil field workers need a sturdy, hard-boiled light that will stand the knocks of everyday usage. That's Delta No. 10! Sells for $2.75 complete, less batteries, and lasts a lifetime. Throws a strong working light for fully 300 feet. Two ordinary No. 6 dry cells last for six months or more.

DELTA
ELECTRIC COMPANY
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PETROLEUM GEOLOGIST
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Analysis of core or drill-cuttings for porosity, saturation, grain-size and permeability.
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Be among the best informed oil men by reading it every week. It will provide you with valuable information that you can use to your own good advantage.

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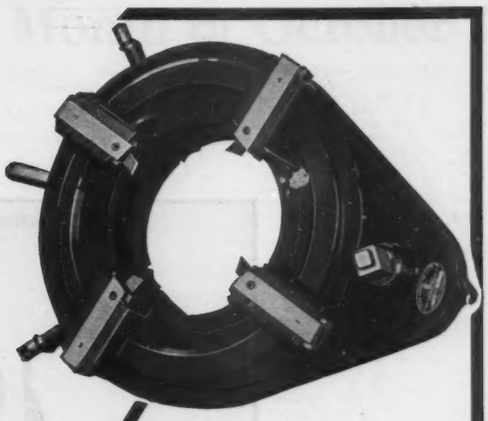


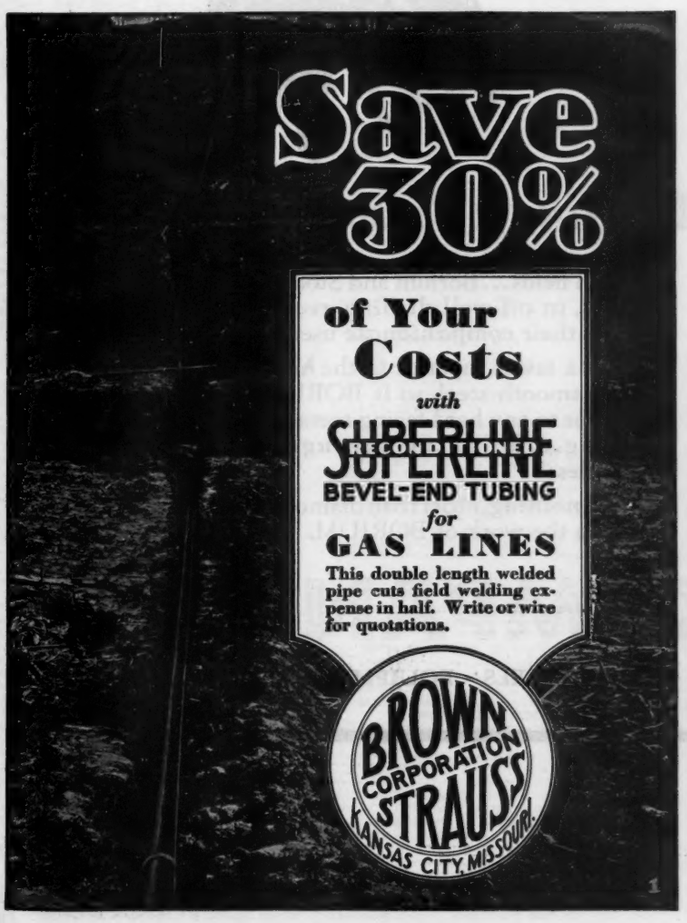
A PERFECT CUT EVERY TIME

A "TOLEDO" Automatic Pipe Cutter never fails. You clamp the tool firmly to the pipe, give the hand-feed wheel a part turn, slip on the ratchet handle or power drive and quickly the pipe is cut off, true and accurate, leaving a straight, square-end cut, without burr.

"TOLEDO" Automatics are made in two sizes, No. 40, 2" to 4"; No. 80, 4½" to 8" and wherever large pipe must be cut off they will do the work most economically. A post card brings you complete information.

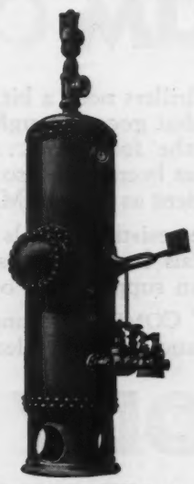
YOU CAN ALWAYS DEPEND ON THE GENUINE "TOLEDO"

THE TOLEDO PIPE THREADING MACHINE CO. Toledo, Ohio



Safety, Efficiency, Simplicity

Gas Conservation has, in many cases, been the result of increased separating pressures.



The efforts to curb waste has called for equipment of increased efficiency.

The Trumble Company have continually worked to improve their product and have met the call for safety and efficiency with the best product possible. Combined with Safety and Efficiency the Trumble is simple in operation and adjustment, with no complicated settings required to meet changing conditions on the well.

The double control on the low pressure models automatically adjusts itself to vacuum or pressure and cannot be adjusted to shut in the well.

TRUMBLE GAS TRAP COMPANY

756 SUBWAY TERMINAL BUILDING

LOS ANGELES, CALIFORNIA

ALBERTA, MONTANA AND WYOMING

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BORIUM *Cuts..like a Keen Saw*

OIL WELL drillers need a bit that ***cuts!***... that ***goes through!***... regardless of the formation... and nothing yet has been found so economically efficient as BORIUM.

Both abrasive-resisting metals and cutting materials have their use... and neither can supplant the other.

THE STOODY COMPANY manufactures the outstanding, ***proven*** leaders in both fields... Borium and Stoodite ...and, in oil-well drilling, recommends their ***companionate*** use.

Just as a saw is superior to the ***hardest*** of smooth steel, so is BORIUM superior to any hard-facing metal for cutting... for ***going through***... regardless!

In fact, ***nothing***, other than diamonds, ***can*** do the work of BORIUM.

STOODY COMPANY

Manufacturers of WELDING ROD • ALLOY STEELS • EQUIPMENT
WHITTIER, CALIFORNIA

Detailed Operations in All Fields for Month of October

SUMMARY OF ALL FIELDS

WELLS COMPLETED

Field—	Comp.	Prod.	Dry	Gas
Eastern	632	2,243	42	69
Central Ohio	122	1,386	32	46
Lima	23	292	6	3
Indiana	22	243	10	1
Michigan	45	7,065	8	5
Illinois	57	1,943	8	1
Kentucky	113	7,054	32	5
Oklahoma	389	190,239	118	41
Kansas	98	16,061	42	2
Texas Panhandle	55	16,503	9	20
N. Central Texas	342	15,104	167	6
E. Central Texas	27	1,800	25	1
West Texas	81	55,354	35	0
Southwest Texas	61	10,447	23	13
East Texas	12	.....	4	8
Gulf Coast	182	75,613	60	5
North Louisiana	55	1,407	8	26
Arkansas	28	737	12	0
Wyoming	18	6,141	8	1
Montana	39	515	19	7
Colorado	6	9	3	1
New Mexico	8	2,634	2	1
Total October	2,415	412,790	673	262
Total September	2,244	501,542	652	240
Difference	171	88,752	21	22

RIGS AND WELLS DRILLING

Field—	Rigs	Dig.	Ttl.
Eastern	150	500	650
Central Ohio	70	194	264
Lima	2	36	38
Indiana	3	41	44
Michigan	59	123	182
Illinois	3	43	46
Kentucky	9	164	173
Tennessee	3	12	15
Alabama	1	5	6
Mississippi	6	15	21
Oklahoma	134	757	891
Kansas	62	268	330
Texas Panhandle	24	133	157
North Central Texas	77	423	500
East Central Texas	2	11	13
West Texas	61	282	343
Southwest Texas	24	158	182
East Texas	4	14	18
Gulf Coast	50	246	296
North Louisiana	71	121	192
Arkansas	10	50	60
Wyoming	24	142	166
Montana	23	95	118
Colorado	14	78	92
New Mexico	30	66	96
Utah	2	30	32
Total October	918	4,007	4,925
Total September	963	4,145	5,108
Difference	45	128	83

Note—In the following report the Section, Township and Range are given first; then the farm, the owner, the serial number of the well and the initial production of the well. In lines where the Section, Township and Range are missing the wells are located in the Sections, Townships and Ranges which appear next above in the report.

OKLAHOMA FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Carter	9	865	3	0
Cotton	8	693	2	0
Creek	47	14,408	11	4
Kay	5	...	3	2
Muskogee	15	7	10	4
Okfuskee	11	610	4	2
Oklahoma	10	48,954	0	0
Okmulgee	18	125	3	3
Osage	29	1,042	11	7
Pawnee	16	890	6	0
Pontotoc	11	4,339	0	3
Pottawatomie	41	12,468	9	1
Seminole	97	97,408	15	5
Stephens	26	420	14	3
Tulsa	5	22	1	1
Wagoner	10	20	8	1
Miscellaneous	31	7,968	18	5
Total October	389	190,239	118	41
Total September	274	77,934	95	20
Difference	115	112,305	23	21

Summary of Rigs and Wells Drilling

County—	Rigs	Drig.	Ttl.
Carter	5	15	20
Cotton	1	8	9
Creek	15	57	72
Grady	2	4	6
Grant	3	10	13
Hughes	2	14	16
Kay	0	5	5
Logan	2	16	18
Lincoln	1	13	14
Muskogee	6	16	22
Noble	0	7	7
Oklahoma	17	53	70
Okfuskee	5	33	38
Okmulgee	3	16	19
Osage	2	28	30
Pawnee	4	4	8
Payne	2	18	20
Pontotoc	7	28	35
Pottawatomie	19	80	99
Seminole	23	215	238
Stephens	9	26	35
Tulsa	0	10	10
Wagoner	2	11	13
Miscellaneous	4	70	74
Total October	134	757	891
Total September	171	792	963
Difference	37	35	72

CARTER COUNTY

WELLS COMPLETED

22-1s-3w See, Ven Mex Oil Co. 1 21
See, Ven Mex Oil Co. 2 68
32-1s-3w Johnson, Magnolia Pet. Co. 5.. dry
33-1s-3w Hefner, Magnolia Pet Co. 8.. dry
3-2s-3w Pruitt, Wirt Franklin Pet. Corp. et al 14 160
10-4s-2w Walker, E. M. Boring et al 6.. 140
32-4s-1 Zellner, Leonard Woodworth 1 dry
30-1s-3w Hightower, Magnolia Pet. Co. 2 293
Dixon, Ven Mex Oil Co. 3..... 183
Wells completed 9
Production 865
Dry 3

COTTON COUNTY

33-1s-10w Lawler, Barnsdall Oil Corp 5 15
35-1s-10w Chambers, Wirt Franklin Pet. Corp. 2 220
17-1s-11w Porter, Bridewell et al 1.... dry
26-1s-10w Cogswell, Scott & Arington 1.. dry
35-1s-10w Chambers, Wirt Franklin Pet. Corp. 3 145
2-2s-10w Slogan, Shasta Oil Co. 3 163
Slogan, Shasta Oil Co. 4 50
Slogan, Shasta Oil Co. 5 100
Wells completed 8
Production 693
Dry 2

CREEK COUNTY

28-17- 7 Keys, Tidal Oil Co. 2..... 50
13-17-10 Fulsom, R. O. Bailey 6..... 30
14-17-10 Baker, The Texas Co. 3..... 60
18-17-10 Jones, Pioneer Pet. Corp. 1... 18
27-16-10 Sewell, Curtis Oil Co. 1..... gas
8-16-11 Jackson, Bryan Pet. Co. 2.... 15
9-16-12 Felix, Turner Bros. 1..... gas
17-15- 8 Mitchell, Franchot Oil Co. 6.. 40
33-15-10 Kimble, Levine et al 1-A..... dry
16-14-10 Bear, Atlantic O. P. Co. 3.... 40
1-19- 8 Asbury, E. H. Short et al 1-B dry
9-18- 7 Thilloco, Bay State Oil Co. 18 10
13-17-10 Fulsom, A. B. Ice 7..... 60
17-17-10 Sheppard, H. L. Dedman 1... 25
24-17-10 Tahkaney, J. H. Wright et al 25 30
11-17-11 M. Davis, Kurell Oil Co. 2.... 10
17-16- 9 Beaver, T. P. C. & O. Co. 3.. 10
18-16- 9 Durant, Selby O. & G. Co. 6.. dry
30-15- 9 Foster, Skelly Oil Co. 2..... 75
27-14-10 Morton, Logan & Kessler 2... 20
3-17-10 Creek, O. M. Irelan et al 1.. dry
20-19- 9 Houston, Phillips Pet. Co. 2.. 20
7-18- 7 Vance, Magnolia Pet. Co. 21.. 40
8-18- 7 Musselman, Magnolia Pet. Co. 10
21-17- 9 Harjoche, T. P. C. & O. Co. 8. 10
9-17-10 Jones, Central Commercial O. & G. Co. 1 ..... gas
18-16- 9 Durant, Carter Oil Co. 9.... 13,000
26-16- 9 Carr, Mid-Cont. Pet. Corp. and Franchot 11 20
10-19- 9 Boles, Operators Oil Co. 1.... dry
24-19- 9 Welch, William Sherry et al 1 dry
6-17- 7 Derrisaw, Magnolia Pet. Co. 6. dry
17-17- 7 Tiger, Magnolia Pet. Co. 3.... 120
Tiger, W. B. Pine 2..... 80
33-17- 7 Dunson, Sinclair O. & G. Co. 24 10
14-17-11 Crabtree, Kurell Oil Co. 4.... dry
21-16- 8 Arsaylee, Peters Pet. Co. 5... 315
36-15- 7 Bigpond, Empire O. & R. Co. 2 40
8-16- 9 Edwards "A," Prairie O. & G. 1 dry
25-19- 8 Hinton, Foster Pet. Co. 1..... 50
19-19- 9 Langley, J. F. Wood Oil Co. 1 dry
28-19- 9 Harmon, Wm. Sherry and Carter Oil Co. 2..... gas
31-18-11 Colvin, Sooner O. & G. Co. 1.. dry
6-17- 7 Derrisaw, The Texas Co. 9... 15
18-17-10 Brown, Pioneer Pet. Co. 1.... 25
18-16- 9 Durant, Carter Oil Co. 10..... 75
35-15- 7 Bosen, Devonian Oil Co. 1.... 40
10-15- 8 Replogle, Skelly Oil Co. 1.... 45
Wells completed 47
Production 14,408
Dry 11
Gas 4
Gas production 20,750,000

KAY COUNTY

14-27-1 Kemmitz, Harris & Haun 1.. dry
31-27-2 Harris, Wentz Oil Corp. 2.... dry
31-28-1 Paden, Geo. Nehr et al 4..... gas
36-28-1w School land, Parrish et al 4.. dry
25-28-1w Sharp, DeCamp Oil Co. 2..... gas
Wells completed 5
Dry 3
Gas 2
Gas production 10,050,000

MUSKOGEE COUNTY

13-15-15 Grayson, E. A. Hutchinson 1. dry
15-13-16 Bruner, Bement Oil Co. 1..... gas
28-16-15 Wheat, John Aggas 1..... 7
35-15-18 Townsite, W. J. Metzger et al 1 dry
7-13-18 Dean, E. D. Glasco et al 1... dry
23-13-18 Cowert, H. D. Johnston et al 1 gas
17-13-17 Sewell, Decius & Garrett 1... dry
28-16-15 Wheat, John Aggas 1..... gas
35-16-15 Richards, Mack Drlg. Co. 1.. dry
28-15-16 Canard, Jack Summers 6..... dry
34-15-18 Spaulding, Arthur Oil Co. 9 . gas
35-15-18 Townsite, C. A. Lovelace et al 1 ..... dry
30-14-16 Sullivan, W. E. Lightner et al 1 ..... dry
13-14-18 Gonseth, W. C. McCullough 1. dry
13-13-18 Head, E. L. Newport et al 1.. dry
Wells completed 15
Production 7
Dry 10
Gas 4
Gas production 6,250,000

OKMULGEE COUNTY

24-15-11 Friday, Sheridan Oil Co. 1.... gas
10-15-14 Carter, F. D. Misner 4..... 5
14-14-14 Colbert, Mechlin & Berlin 7.. 6
Colbert, J. E. Wallace 9..... 12
23-13-14 Myers, F. Sheedy 15 7
6-15-13 Brooks, J. H. Rebold 2..... 35
13-14-14 Chatman, Mechlin & Berlin 1-A 6
14-14-14 Colbert, F. D. Misner 3..... 8
35-14-14 A. Anderson, J. L. Selby 35 . 10
Fowler, Tiger Mtn. Oil Co. 13 dry
7-15-15 Freeman, E. J. Lambert 5.... gas
28-15-13 Brown, Edgerley et al 1-A.. 4
33-14-12 Richards, M. A. Wilder et al 1-A ..... dry
24-15-12 Hogan, Lockhart Gas Co. 1... dry
20-15-13 M. Price, Kirkland & Son 4... gas
15-13-14 Reynolds, Penrod & Thompson 9 10
7-13-15 L. Freeman, E. J. Lambert et al 3 7
29-15-11 Coleman, Getzendaner et al 6. 15
Wells completed 18
Production 125
Dry 3
Gas 3
Gas production 11,750,000

OKFUSKEE COUNTY

35-11- 9 Alexander, Grimes Gasoline 1-A gas
14-10- 9 Rhea, T. W. Atkins 1..... dry
11-10-11 Douglas, Regal Oil Co. 9..... 25
22-10-11 Lowe, Independent O. & G. and Kingwood Oil 2 ..... dry
15-11-11 Jacobs, Champlin O. & R. 14. 8
31-11-11 Dindy "B," Mid-Cont. Pet. 3.. 252
17-11-12 Summers, M. C. French et al 1-A ..... gas
6-10-12 Barnett, Ashe et al 1..... dry
29- 9-10 Willis, Superior Oil Corp. 1... dry
27-12-12 Bullet, Milmac Oil Co. 1-A... 250
23-11-11 Grayson, F. A. Havell et al 1.. 75
Wells completed 11
Production 610
Dry 4
Gas 2
Gas production 13,000,000

OKLAHOMA COUNTY

13-11-3w Trosper Park, Wirt Franklin et. Corp. et al 1..... 8462
24-11-3w Olds, Coline Oil Co. 1..... 4998
Bodine A, I. T. I. O. Co. et al 2 3443
Fortson, Mid-Kansas Oil 1... 3858
Fortson, Mid-Kansas Oil 2... 5705
19-11-2w Button, I. T. I. O. Co. 1..... 5756
30-11-2w Petty, Shell Pet. Corp. 1..... 9506
12-11-3w Lowery, Wirt Franklin Pet. Corp. et al 2..... 6068
19-12-1w Trosper, Mid-Kansas O. & G. Co. and Ramsey 1..... 660
30-11-2w S. Bodine, I. T. I. O. Co. et al 1 4298
Wells completed 10
Production 48,954

OSAGE COUNTY

35-29-10 I. T. I. O. Co. 416 ..... dry
27-27-11 Peters Pet. Corp. and P. & R. Corp. 3 40
2-26- 8 Nath Jones 1 5
30-25- 8 The Texas Co. 8 150
26-23- 9 A. G. Oliphant 1 ..... dry
4-20-10 Okla. Power & Water Co. 121. gas
22-29-11 Winona Oil Co. 13..... 5
26-27-11 I. T. I. O. Co. 414..... gas
22-24- 7 Kay County Gas Co. 8-B..... gas
34-29-10 I. T. I. O. Co. 426..... dry
29-28-11 Osage Gas Producers Co. 395. gas
22-22-11 Barnsdall Oil Co. and Branstetter 5 30
4-20-10 Okla. Power & Water Co. 122. gas
30-25- 8 Prairie O. & G. Co. 6..... 325
22-27-11 Peters Pet. Corp. 7..... 90
23-26- 7 White Eagle O. & R. Co. 1... dry
28-21-11 Peters Pet. Corp. et al 1..... 12
22-27-11 Peters Pet. Corp. and P. & R. Corp. 4 200
19-26- 7 Peters Pet. Corp. and P. & R. Corp. 1 ..... dry
13-24- 6 A. G. Oliphant et al 1..... dry
15-24- 8 McCune, Wormser et al 3..... 159
5-24-11 Grace Maxwell 4..... dry
17-23-12 Silurian Oil Co. 56..... 35
32-22- 8 Wrightsman Pet. Co. 1..... dry
13-22- 9 Mid-Co Oil Co. 1 ..... dry
33-22-11 Elliott & Smith 2 ..... dry
6-21-12 Okla. Nat. Gas Corp. 1,738... gas
4-20-10 Okla. Power & Water Co. 120. dry
Okla. Power & Water Co. 123. gas
Wells completed 29
Production 1042
Dry 11
Gas 7
Gas production 20,875,000

PAWNEE COUNTY

16-21- 7 Pinkstaff, Fisher et al 2..... dry
30-21- 9 Edmiston, Geraldine Oil Co. 2 15
18-20- 8 Turner, Mowry & Fugate 1-A dry
23-21- 7 Hull, J. H. Markham 6..... 10
35-20- 9 Smelzer, Bert Swift 5..... 75
25-21- 8 Thomas, Peter Adamson, Jr. 6 dry
Green, Capitol Hill Oil Co. 1-A 10
20-20- 9 Brodell, Superior Oil Corp. 1. dry
27-20- 9 Byles, Johnson O. & R. Co. 1. 118
35-20- 9 Wiggs, Roy Sears et al 5..... 129
22-22- 4 Cary, J. L. Donahue 1-A..... 100
25-20- 6 Harbisch, Houston Oil Co. 1.. dry
20-20-10 Miller, E. R. Spees et al 1... dry
6-20- 8 Cotton, Prairie O. & G. Co. 4. 300
25-21- 8 Smith, Peter Adamson, Jr. 7. 18
26-20- 9 Copeland, Hay et al 3..... 125
Wells completed 16
Production 890
Dry 6

PONTOTOC COUNTY

31-4-7 Johnson, Patsy O. & G. Co. 1... gas
19-5-5 Norris, Empire O. & R. Co. 3...1005
Norris, Independent O. & G. 1.. 190
28-5-5 Jacob, Benedum & Trees 1..... gas
31-5-5 Mole, Benedum & Trees 5..... 125
19-5-5 Bolen, Transcontinental Oil 2... 2132
31-5-5 Mathews, Benedum & Trees 1.... 166
Coker, Benedum & Trees 1..... 148
19-5-5 Norris, Empire O. & R. Co. 2... 125
32-5-7 Williamson, Belchie & Laskie 1. gas
18-5-8 Millner, W. R. Ramsey 8..... 448
Wells completed 11
Production 4339
Gas 3
Gas production 13,000,000

POTTAWATOMIE COUNTY

26-8-4 Weldfeld, Phillips Pet. Co. 1... dry
9-7-4 Douglas, Atlantic O. P. Co. et al 1 150
Bewley, Atlantic O. P. Co. and Champlin O. & R. Co. 1..... 50
11-7-4 Ma-Qua-Ka, Sinclair O. & G. 1.. 335
15-7-4 Cardwell, Darby Pet. Co. and Atlantic O. P. Co. 1..... 478
16-7-4 Simms, Minnehoma Oil Co. 3.... 360
Youngblood, Darby Pet. Co. 4.. 200
17-7-4 Hines, Healdton O. & G. Co. 1.. 395
18-6-4 Townsite, Sikes & Douglas 1.... dry
5-9-5 Rogers, Mid-Cont. Pet. Corp. 5.. 310
19-8-5 Hudson, Phillips Pet. Co. 2..... dry
8-7-4 Jones, Magnolia Pet. Co. 2..... 45
16-7-4 Youngblood, Darby Pet. Corp. 3. dry
Youngblood, Darby Pet. Corp. 6. 100
22-7-4 Billington, Magnolia Pet. Co. 4. gas
19-6-4 Townsite, Commerce Dev. Co. 1. 40
Lasater, Prairie O. & G. Co. and T. B. Slick 5..... 200
31-6-7 Anna, Prairie O. & G. Co. and T. B. Slick 1 ..... dry
9-8-5 Jordan, Shell Pet. Corp. 2.....1113
17-7-4 Green, Gypsy Oil Co. 3..... 430
Green, Gypsy Oil Co. 4..... 342
22-7-4 Hines, Shell Pet. Corp. 1.....2033
35-8-4 Shobe, I. T. I. Oil Co. 2..... 123
35-8-4 Mull, Independent O. & G. Co. and Mid-Kansas Oil 1..... 241
36-8-4 Jackson, Empire O. & R. Co. 1.. 360
9-8-5 Roberts, McMan Oil Co. and White Eagle O. & R. Co. 2... 650
28-8-5 Green, Wofford Drlg. Co. 1..... dry
13-7-4 Caudle, Magnolia Pet. Co. 2.... 200
16-7-4 Burke, Atlantic O. P. Co. and Independent O. & G. 3..... 425
16-7-4 Latimer, T. B. Slick and White Eagle O. & R. 1..... 800
18-6-4 Townsite, Commerce Dev. Co. 1. dry
19-6-4 Laster, Simms Oil Co. 4..... 120
Laster, Simms Oil Co. 5..... 340
Townsite, Stogner et al 1..... dry
8-8-5 Smith, H. F. Wilcox O. & G. 8.. 252
2-7-4 Weldfelt, Independent O. & G. Co. and Mid-Kansas Oil 1.....1552
Kelly "A", Sinclair O. & G. Co. et al 2 30
8-7-4 Jones, Magnolia Pet. Co. 1..... 9
21-7-4 Lynn, Magnolia Pet. Co. et al 1. 460
11-6-3 Adams, Shaffer O. & R. Co. and Margay Oil Co. 1..... dry
19-6-4 Walker, T. B. Slick and Amerada Pet. Corp. 2 325
Wells completed 41
Production 12,468
Dry 9
Gas 1
Gas production 8,500,000

SEMINOLE COUNTY

32-10-6 Varnum, Magnolia Pet. Co. 3.. 200
18- 9-6 Wisner, Prairie O. & G. Co. 1..2170
17- 9-6 Calkins, Prairie O. & G. Co. 2.2965
18- 9-6 Payne, Gypsy Oil Co. 3.....2318
A. Anderson, Magnolia Pet. 5..1440
A. Anderson, Magnolia Pet. 7..2000
Noble, Gypsy Oil Co. 1.....1520
Noble, Barnsdall Oil Co. 2....1450
18- 9-7 Johnson, Continental Oil Co. 2. 800
W. Harjo, Gypsy Oil Co. 2.... 324
Drewery, Magnolia Pet. Co. 2.. 56
14- 7-6 Talley, Blackwell O. & G. 4-A. 380
23- 7-6 Harris, Independent O. & G. 13 gas
5- 7-7 Smith, Mid-Continent Pet. 12...1615
32-10-6 Crump, Shell Pet. Corp. 2..... 15
24- 9-5 Baker, Prairie O. & G. Co. 7.. 500
11- 9-6 C-Slick, Carter Oil Co. 2..... 20
C-Amerada, Carter Oil Co. 1.. 10
17- 9-6 Noe, Minnehoma Oil Co. 1.....8937
18- 9-6 Noble, Barnsdall Oil Co. 1..... 10
Noble, Gypsy Oil Co. 2.....1386
Payne, Gypsy Oil and Devonian Oil Co. 5 3723
A. Anderson, Magnolia Pet. 6..3240
18- 9-7 Perry, Continental Oil and Sinclair O. & G. 2..... 130
Coody, Sinclair O. & G. Co. 3.. 50
15- 9-8 Polk, Prairie O. & G. Co. 1.... dry
8- 8-6 Micco, Gypsy Oil Co. 2..... dry
11- 8-5 Bean, Sinclair O. & G. Co. 5... 265
18- 8-6 Owens, Magnolia Pet. Co. 1.... dry
5- 8-7 Anderson, Magnolia Pet. Co. 1. dry
13- 7-6 Coker, Empire O. & R. Co. 3... gas
14- 7-6 Hulhoke, Gypsy Oil Co. 6..... gas
5- 7-7 Walker, Gypsy Oil Co. 1.....1805
Payne, Gypsy Oil Co. 4.....1942
Payne, Gypsy Oil Co. 5.....3362
13- 6-7 Bond, Signal Oil Co. 3.....1250
12- 6-7 Diament, Prairie O. & G. 1....1422
7- 6-8 Davis "A," Sinclair O. & G. 8.. 25
Holatka, Shell Pet. Corp. 2.... 200
18- 6-8 Patten; Prairie O. & G. Co. 2.. 90
Lucy, Burke Greis Oil Co. 5... 350
13- 9-5 Gilliam, Barnsdall Oil Co. 1... 293
16- 9-6 C-Wisher, Carter Oil Co. 1.... 100
17- 9-6 Jones, Burke Greis Oil Co. 1...2330
18- 9-6 S. Payne, Gypsy Oil and Devonian Oil 2 1062
19- 9-6 Wrightsman, Carter Oil Co. 1..3330
11- 8-5 Harjo, Sinclair O. & G. Co. 4.. 252
6- 8-6 Harjo, W. B. Pine 4..... 720
4- 8-7 Reed, Magnolia Pet. Co. 2..... 45
4- 7-7 Chilcoat, The Texas Co. 1.....1135
5- 7-7 Phillips, Sinclair O. & G. 2...3415
Phillips, Sinclair O. & G. 4....1630
7- 6-8 Holatka, I. T. I. Oil Co. 1..... 860
13- 6-7 Bond, Signal Oil Co. 2..... dry
Bond, Signal Oil Co. 4.....2125
23- 5-7 Peters, Gypsy Oil Co. 2..... 830
Peters, Gypsy Oil Co. 3..... 325
36-10-5 McKoy, Superior Oil Corp. and Shaffer O. & R. Co. 4..... 239
31-10-6 Cox, Carter Oil Co. 125
18- 9-6 A. Anderson, Magnolia Pet. 9.. 315
17- 9-7 Warrior, Sinclair O. & G. and Phillips Pet. 2..... 290
18- 9-7 Okfuskee, Sinclair O. & G. Co. and Gypsy Oil 1..... 130
Coody, Sinclair O. & G. Co. 4.. 415
3- 8-5 Brown, Empire O. & R. Co. 1.. dry
2- 7-6 L. Davis, Independent O. & G. Co. and White Eagle 5.....1605
23- 7-6 Hotulke, The Texas Co. 7..... 265
24- 7-6 Walker, Carter Oil Co. 1..... 270
4- 7-7 Harris, Continental Oil et al 4. 560
5- 7-7 Smith, Prairie O. & G. Co. 1...2105
Smith, Mid-Cont. Pet. Corp. 9.2150
Phillips, Sinclair O. & G. Co. 5.1900
13- 6-7 Tiger I. T. I. Oil Co. 1..... dry
Powers, I. T. I. Oil Co. 1..... dry
Bates, Pure Oil Co. 3.....1075

Bates, Pure Oil Co. 4..... 4000
7- 6-8 Holatka, I. T. I. Oil Co. 2..... 713
Davis "A," Sinclair O. & G. 7 490
25-10-6 Fife, I. T. I. Oil Co. 1..... dry
22- 9-5 Anderson, Twin State Oil Co. 1 8
24- 9-5 Moore, Magnolia Pet. Co. 2.... 758
17- 9-6 Sullivan, Amerada Pet. Corp. 2 2615
18- 9-6 Payne, Gypsy Oil Co. and Devonian Oil Co. 4.....2750
Payne, Gypsy Oil Co. and Devonian Oil Co. 6..... 992
Smith, Con.inental Oil Co. 1... dry
28- 9-6 Strothers "G," Pure Oil Co. 1.. dry
4- 8-7 Reed, Magnolia Pet. Co. 3..... 63
14- 7-6 Tewee, Independent O. & G. 7.. gas
22- 7-6 Reed, Magnolia Pet. Co. 7..... dry
13- 7-6 Davis, Producers & Refiners 1. 770
23- 7-6 Hotulke, Shell Pet. Corp. 4-A.. 386
Cotcha, Pure Oil Co. 12..... 460
24- 7-6 Charty, Empire O. & R. Co. 2.. gas
5- 7-7 Payne, Gypsy Oil Co. 6..... 1067
8- 7-7 Yarhola, Mid-Cont. Pet. Corp. 1 dry
13- 6-7 Bates, Pure Oil Co. 1..... dry
7- 6-8 Holatka, Independent O. & G. Co. and Margay Oil 1..... dry
24- 5-7 Joanna, Sunray Oil Co. and Cal Cul Oil Co. 3..... 220

Wells completed 97
Production 97,408
Dry 15
Gas 5
Gas production 146,000,000

STEPHENS COUNTY

34-1s-8w Simpson, Roy Carter 9..... 15
35-1s-8w Pool, Heydrick e. al 3..... dry
2-2s-8w Gilworth, Mid-Cont. Pet. Corp. and Ven Mex Oil 1-C..... dry
13-2s-8w Marks, Magnolia Pet. Co. 5.. 7
McMastera, Pace et al 10..... dry
Marks, Pace et al 1..... dry
21-2s-7w Bunch, Jenkins et al 1..... dry
17-2s-7w Wilson, Lesh & McCall 1.... dry
21-2s-7w Johnson, Pace et al 1..... dry
8-2s-6w Brooks, Wirt Franklin Pet. 1 gas
25-1s-9w D. Russell, Magnolia Pet. Co. 8 dry
33-1s-8w Stephens, Magnolia Pet. Co. 1 gas
34-1s-8w Nigh, Ellis Drlg. Co. 7..... 25
24-1s-4w Bell, Wirt Franklin Pet. Corp. 2 ..... dry
30-1s-3w Dixon, Ven Mex Oil Co. 2.... 195
2-2s-3w Houston, Pace and Texhoma Oil Co. 3 45
35- 1-9w Allen, Denver & Wichita Falls P. L. Co. 1..... dry
16-1s-8w Broadbent, Skyes et al 1... gas
28-1s-8w Taliaferro, Denver & Wichita Falls P. L. Co. 6..... dry
34-1s-8w Kagay, Magnolia Pet. Co. 26 . 15
Simpson, Lone Eagle Oil Co. 14 dry
3-2s-8w Allen, Geo. Pace et al 4..... dry
34-1s-8w Nigh, Ellis Drlg. Co. 8..... 60
Kagay, Magnolia Pet. Co. 25.. 33
13-2s-7w Bristowe, Pace et al 4..... dry
11-3s-5w Leftwitch, Tooey & Long 1... dry

Wells completed 26
Production 420
Dry 14
Gas 3
Gas production 62,000,000

TULSA COUNTY

2-19-10 Harjo, Hoss et al 1..... 8
19-16-14 A. Barnett, W. C. Parks 2.... 5
14-16-13 Fox, Bessinger et al 1..... gas
16-16-14 Mason, Highland Oil Co. 5.... 9
22-16-13 Fox, H. R. Johnson et al 1... dry

Wells completed 5
Production 22
Dry 1
Gas 1
Gas production 6,000,000

WAGONER COUNTY

13-17-15 Denton, James Sewell et al 1.. 20
6-17-18 Pl.ts, Horner et al 1..... gas
25-16-17 Brown, R. Kenworthy 1..... dry
36-16-17 Smith, Cherokee Public Service Co. 1 ..... dry
33-19-16 Murrel, C. A. Buzzard et al 1 dry
30-18-15 Drew, Meohlin & Hoy 1..... dry
15-18-17 Drew, Ash Bros. 1..... dry
11-17-17 Perryman, W. S. Mitchell 1 .. dry
12-16-15 Barnett, Knox & Shouse 2-A.. dry
4-16-18 Grayson, Cory & Henry 1..... dry

Wells completed 10
Production 20
Dry 8
Gas 1
Gas production 1,000,000

MISCELLANEOUS COUNTIES

Grady County—
34-4-8w Kinnard, Meridian Gas Co. 1.. gas
35-5-8w Dryden, Public Service Co. of Okla. 5 ..... gas

Hughes County—
18-9-9 Oliphant, Burke-Greis Oil Co. 1.. 175
22-7-8 Witty, Magnolia Pet. Co. 1 .... dry

Grant County—
17-29-4w Clark, Amerada Pet. Corp. 1..1000
14-27-3w Stuarsky, Consolidated Utility Co. 1 ..... dry
35-28-3w Henn, Cons. Utility Corp. 2.. gas

Jefferson County—
20-7s-5w Pfile, McGinley & Sigler 8.... 20
Pfile, McGinley & Sigler 9.... 20
Pfile, McGinley & Sigler 10... 20
Pfile, McGinley & Sigler 11... dry

Kiowa County—
18-6-16w Foster, George Echelman et al 2 10
2-6-17w Hamilton, W. C. Adams 1.... dry
2-5-17w Sherwood, L. P. McWhirter 1. dry

Coal County—
6-2-8 Richardson, J. S. Cosden Co., Inc. 1 ..... dry
10-2-8 Miller, E. W. Whitney 1..... dry

Harper County—
14-25-22w Cooper, Hoffer Oil Corp. 1... dry

Kingfisher County—
27-16-6w Sturgeon, Crawford & McKenna 1 ..... dry

Comanche County—
3-3-10w Hallum, Floyd Cooper 1..... 7

Logan County—
30-19-4w McCully, Shell Pet. Corp. 7.. dry
Sebranek, Shell Pet. Corp. 6..2056
McCully, Shell Pet. Corp. 9..2860
McCully, Shell Pet. Corp. 10..1785

Marshall County—
30-5s-6 Davis-Sullivan, Bilbo Oil Trust Co. 2 15

Garvin County—
18-1-2w Jones, T.P. C. & O. Co. 1..... dry

McIntosh County—
22-12-14 Smith, W. S. Sessions 1-A..... dry

Noble County—
29-24-1w Case, Midco Oil Co. 15..... dry

Payne County—
9-19-5 Garr, Comail Oil Co. 2..... dry
13-18-5 Grass, Home Gas Co. 1..... dry

LeFlore County—
28-7-2e Jackson, LeFlore County G. & E. Co. 2 ..... gas

Woods County—
14-28-16w Cromwell, Peerless O. P. Co. 1 dry

Lincoln County—
27-17-4 McKeown, Blackwell O. & G. 1 dry
36-17-3 School land, Continental Oil 1.. gas
28-17-6 Davis, F. R. Billingslea et al 1 dry

Wells completed 31
Production 7968
Dry 18
Gas 5
Gas production 39,000,000

KANSAS FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Butler	16	1,075	5	0
Cowley	4	160	2	0
Elk	3	1,150	2	0
Greenwood	19	2,322	5	1
McPherson	5	5,420	1	1
Sedgwick	25	4,758	13	0
Sumner	4	415	1	0
Miscellaneous	22	761	13	0
Total October	98	16,061	42	2
Total September	87	13,690	45	2
Difference	11	2,371	3	0

Summary of Rigs and Wells Drilling

County—	Rigs	Drlg.	Ttl.
Butler	10	27	37
Cowley	3	17	20
Elk	1	8	9
Ellis	3	8	11
Greenwood	4	30	34
Harvey	1	8	9
McPherson	6	17	23
Marion	1	10	11
Russell	0	8	8
Sedgwick	14	27	41
Sumner	2	17	19
Woodson	2	11	13
Miscellaneous	15	80	95
Total October	62	268	330
Total September	63	288	351
Difference	1	20	21

WELLS COMPLETED
BUTLER COUNTY

9-26-3 Cambell, Arkansas Natural Gas Corp. 1 35
19-26-5 Huston, Empire O. & R. Co. 17.. 75
20-26-5 Koogler, Empire O. & R. Co. 85 150
34-27-5 Hutchinson "C," Empire O. & R. Co. 2 150
18-26-5 Gussman, Empire O. & R. Co. 16 100
20-26-5 Koogler, Empire O. & R. Co. 86 175
Koogler, Empire O. & R. Co. 87 75
21-25-3 Harrison, Travis et al 1 ..... dry
15-26-3 Lancer, Lario O. & G. Co. 1 ... dry
19-26-5 Koogler, Empire O. & R. Co. 88 100
34-27S Hutchinson "A," Empire O. & R. Co. 4 ..... dry
Hutchinson "A," Empire O. & R. Co. 5 125
24-27-3 Sharron, Aladdin Pet. Co. 1 50
8-27-6 Budles, Johnson et al 2 40
18-27-7 Lill, Lewis Prod. Co. 1 ..... dry
34-29-5 Lanier, Prairie O. & G. Co. 1.... dry

Wells completed 16
Production 1075
Dry 5

COWLEY COUNTY

7-33-3 Roberts, McKnabb & Bess et al 1 150
6-31-6 Eastman, The Texas Co. 15 10
15-31-3 Liggett, Shawver et al 2 ..... dry
14-34-4 Demott, Prairie O. & G. Co. 1.. dry

Wells completed 4
Production 160
Dry 2

ELK COUNTY

9-30- 9 Kayser, Elk Petroleum Co. 9... dry
31-31- 8 Ferguson, Minnehoma Oil Co et al 3 1150
4-31-10 McSpadden, Sherman et al 1.. dry

Wells completed 3
Production 1150
Dry 2

GREENWOOD COUNTY

18-22-11 Clopton, Simmons et al 7 .... dry
21-23-11 Edwards "B," Empire O. & R. Co. 5 500
27-23-11 Ellis, Dixie Oil & Amerada Pet. Corp. 1 200
28-23-11 Beal, Phillips Pet. Co. 4 200
36-23-11 Patterson "C," Empire O. & R. Co. 2 400
5-24-13 Dalton, Waltom Oil Co. 1 40
17-24-13 Hinchman, McCulloch et al 1.. dry
7-24-13 Sharp, Prairie O. & G. Co. 1.. 55
9-25-13 Webber, Prairie O. & G. Co. 4.. 240
3-22-11 Blakely, Gordon & Staats 1.... dry
14-23-11 Lefebure, Loy, Cory & Simmons 1 ..... dry
36-23-11 Patterson "A," Empire O. & R. Co. 3 20
25-27- 8 Lewis, Christy & McCulloch 1 gas
22-22-12 Norton "C," Empire O. & R. Co. 1 170
14-23-11 Broun, Sullivan et al 1 ..... dry
22-23-11 Patterson, Simmons & Rhodes 2 250
11-24-12 Hout, Mid-Continent Pet. Corp. 5 50
15-24-12 Johnson, Prairie O. & G. Co. 4.. 77
9-25-13 Empire O. & R. Co. 4 120

Wells completed 19
Production 2322
Dry 5
Gas 1
Gas production 3,000,000

McPHERSON COUNTY

36-18-4w Swenson, E. W. Marland Inc. 1 dry
1-20-2w Ritz, Shell Pet. Corp. 2 2210
11-19-2w Hull, McPherson O. & G. Dev. Co. 1 ..... gas
12-20-2w Munn, The Texas Company 1.2160
9-21-3w Stuckey, Derby Oil Co. 1.....1050

Wells completed 5
Production 5420
Dry 1
Gas 1
Gas production 30,000,000

SEDGWICK COUNTY

11-26-2 Gracher, Skelly Oil Co. 1 ..... dry
2-26-2 Hinds, Prairie O. & G. Co. 1... dry
15-26-2 Mason, G. L. Ramsey et al 2.. dry
15-26-2 Hladick, Hays et al 2 290
Johndro, John Rogers et al 1 145
27-27-1 Scheweiter, Old Trail Oil Co. et al 1 ..... dry
7-27-2 Calkins, Lario O. & G. Co. 1... dry
22-28-1 Stuckey, Milmac Oil Corp. 1.. dry
4-25-1w Rayburn, Twist et al 1 ..... dry
15-26-2 Brown, Shell Pet. Corp. 2 1200
Fischer, Shell Pet. Corp. 2 422
2-26-1w Evans, G. L. Ramsey et al 1 .. dry
12-26-1w Wright, Bu Vi Bar Pet Corp et al 8 511
23-29-1w Roy, Johnson & Marshall 1 ... dry
22-26-2 Lygrisse "C," Shell Pet. Corp 1 dry
22-26-2 Hamant, Shell Pet. Corp. 1 ... 487
21-28-1 Robbins, Shell Pet. Corp. 1 242
27-29-1w Teachant, Lario O. & G. Co. 1 dry
1-26-1w Bright, Wentz Oil Corp. 3 482
10-26-2 Meers, Wentz Oil Corp. 1..... dry
15-26-2 Lygrisse "B," Shell Pet. Corp. 2 205
Lygrisse "B," Shell Pet. Corp. 3 225
Right of Way, E. F. Jones et al 1 250
Elliott, Deal et al 1 290
27-26-2 Jansen, Shell Pet. Corp. 1 .... dry

Wells completed 25
Production 4758
Dry 13

SUMNER COUNTY

26-34-2 Kratz, Dickey & Carter Oil Co. 1 140
36-31-2 Bussard "B," Washoma Oil Co. et al 3 200
14-32-2 Buffington, McDonald et al 2 .. dry
17-32-2 Miller, Shell Pet. Corp. 2 75

Wells completed 4
Production 415
Dry 1

MISCELLANEOUS COUNTIES

Chautauqua County—
33-32-10 Wiggam, E. B. Miller 3 20

Chase County—
13-21-9 Owens, Sinclair O. & G. Co. 1.. dry

Coffey County—
13-23-14 Scott, Ellis & Huff 1 25

Ellis County—
9-13-19w Johnson, Barnsdall Oil Co. 1.. 206
Berjo, Phillips Pet. Co. 1 125

Harvey County—
24-23-3w Ingalls, Rosenthal et al 1.... dry
26-22-1w Nebergall, Roth & Faurot et al 1 ..... dry
16-24-1 Ady, Lee Payne et al 1 ..... dry

Kingman County—
21-27-7w Raye, D. P. Fleeger et al 1 .... dry

Kiowa County—
35-27-17w Woodward, British American O. & G. Co. 1 ..... dry

Marion County—
1-19-1 Bartles, Jim Davis et al 1 .... dry
7-19-3 Rample, Davis et al 3 ..... dry

Morris County—
14-16-7 Southwick, Arrow O. & G. Co. 2 dry

Osborne County—
22-6-15w Paynter, Trees Oil Co. 1 ..... dry

Rice County—
21-20-10w Schurr, T. B. Slick et al 1... 150

Riley County—
32- 7-5 Lundstrum, Derby Oil Co. et al 1 ..... dry

Russell County—
32-13-15w Mermas, Burbank et al 11 .. 100
Baxter, Mid-West Explt'n Co. 4 100

Rush County—
8-18-17w Senesser, Sinclair O. & G. Co. 1 ..... dry

Woodson County—
28-23-14 Reed, Harper O. & G. Co. 1 .. 10
Reed, Harper O. & G. Co. 2 .. 25

Shawnee County—
2-11-14 Allen, Omar O. & G. Co. 1 ... dry

Wells completed 22
Production 761
Dry 13

PANHANDLE FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Carson	9	1,472	0	4
Cottle	0	0	2	0
Gray	25	12,571	3	3
Hall	0	0	1	0
Hartley	0	0	1	0
Hutchinson	7	2,235	0	1
King	0	0	1	0
Moore	2	225	0	1
Wheeler	12	0	1	11
Total October	55	16,503	9	20
Total September	55	16,504	7	16
Difference	0	1	2	4

Summary of Rigs and Wells Drilling

County—	Rigs	S.D.	Drlg.	Ttl.
Carson	8	10	10	28
Gray	12	21	46	79
Hutchinson	0	5	12	17
Moore	0	1	4	5
Wheeler	4	0	9	13
Miscellaneous	0	8	7	15
Total October	24	45	88	157
Total September	31	46	116	193
Difference	7	1	28	36

WELLS COMPLETED
CARSON COUNTY

Cooper, Gulf Prod. Co., 3 437
J. W. Connell, Champlin Refg. Co., 4 .. 50
Burnett, Empire G. & G. Co. 19..... gas
Deahl, Empire G. & F. Co. 1..... gas
Fuqua, Empire G. & F. Co. 1..... gas
M. P. Co.-Lane, Empire G. & F. Co. 2.. gas
Cooper, Midwest Expl. Co., 4 125
Schafer, Skelly Oil Co., 18 550
Cooper, Gulf Prod. Co., 4 310

Completions 9
Production 1472
Gas 4
Gas production 64,000,000

COTTLE COUNTY

Yarbrough, Sun Oil Co. 1..... dry
Matadar Land & Cattle Co., Exploration of Texas 3 ..... dry

GRAY COUNTY

J. S. Morse, Adams Oil Co. 3..... 150
M. B. Davis, Mordyan O. & G. Co., 2 .. 725
A. E. Bethings, Sherwood et al, 1 60
M. B. Davis, The Texas Co., 4 925
M. B. Davis, The Texas Co., 5 570
B. E. Finley, P. A. Tharp, 1 240
W. Jackson, Humble O. & R. Co., 1 2440
G. H. Saunders. McMan O. & G. Co., 3 . 100
H. K. Beck, Danciger O. & R. Co., 5 ..1070
J. L. Noel, Dye & Gillette, 2 120
Palmer, Phillips Pet. Co., 7 170
Cook-Faulkner, The Texas Co., 4 2000
Combs-Worley, Wilcox-Pampa Oil Co., 9 240
Chapman, Ray & Massie 5..... dry
Jackson, Champlin Ref. Co. 2..... dry
McLaughlin, Champlin Refg. Co., 3 .. 4
Faulkner, White Eagle et al, 1 960
Worley-Reynolds, Wilcox-Pampa O. C.32 265
Worley et al-A, Gulf Prod. Co. 2..... 190
J. B. Bowers-A, Gulf Prod. Co. 8..... 525
H. K. Beck, Danciger O. & R. Co., 4 537
J. M. Saunders, Dodson & Shell (Now Big Gray Oil Co.) No. 1 984
Hollenbeck, Independent O. & G. Co., 1 27
J. H. Palmer, McMan Oil & Gas Co., 6 300
B. Bull, The Texas Co., 3 24
P. A. Worley et al-A, Gulf Prod. Co., dry

Completions 25
Production 12571
Dry 3
Gas 3
Gas production 55,000,000

HALL COUNTY

Hughes est., Rio Bravo Oil Co. 1..... dry

HARTLEY COUNTY

Lee Bivins-A, Canadian River Gas 11.. dry

HUTCHINSON COUNTY

J. M. Sanford, McMan O. & G. Co. 2.... gas
J. L. Moore, Midwest Expl. Co., 2 200
H. E. Smith et al, Pennowa Oil Co., 3.. 125
Johnson Bros.-Katz, Phillips Pet. 1....1500
J. L. Moore, Holmes et al, 2 190
Diana Shaw, Prairie Oil & Gas Co., 4 .. 120
Johnson Bros., Rock Creek Oil Co., 4 .. 100

Completions 7
Production 2235
Gas 1
Gas production 10,000,000

KING COUNTY

Mary A. Martin, Huff Oil Co. 1..... dry

MOORE COUNTY

J. C. Wilson, Phillips Pet. Co. 1..... gas
Armstrong & Byrd, Skelly Oil Co., 10 .. 225

Completions 2
Production 225
Gas 1
Gas production 22,000,000

WHEELER COUNTY

E. A. Linkey, Angus et al 1..... gas
C. Hicks, Johnson et al 1..... gas
Sewell, The Texas Co. 2..... gas
Laycock, Magnolia Pet. Co. 1..... gas
Pitsch, Martin & Debous 1..... gas
Close, Murchison & Fain 3..... gas
Purcell, Osage Dev. Co. 1..... gas
Ackley, Vaughn et al 5..... gas
Cuddleback, Anderson et al 1..... gas
Johnson, Byrens et al 1 ..... dry
Gooch, Upham Gas Co. 4..... gas
Shelton, Upham Gas Co. 1..... gas

Completions 12
Dry 1
Gas 11
Gas production 298,000,000

SOUTHWEST TEXAS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Dlg.	Ttl.
Mirando	14	877	3	5	5	25	30
Bruner	3	375	1	0	0	4	4
Buchanan	1	75	0	0	0	1	1
Refugio	21	9,100	1	4	7	29	36
Agua Dulce	2	0	0	2	1	1	2
Miscellaneous	20	20	18	2	11	98	109
Total Oct.	61	10,447	23	13	24	158	182
Total Sept.	100	15,212	51	9	40	169	209
Difference	39	4,765	28	4	16	11	27

WELLS COMPLETED
KOHLER FIELD—DUVAL

Kohler, Humble O. & R. Co. 33..... gas

SCHOOLFIELD AND O'BYRNE

Hahl, Magnolia Pet. Co. 8..... 75
Lundell, Magnolia Pet. Co. 1..... gas
Bowe, S. & O. Oil Co. 5..... 10
Hahl, C. E. Long 1..... 100

WILDCATS

Corbett, Magnolia Pet. Co. 1..... abd

HENNE-WINCH & FARISS—JIM HOGG

Holbien, A. W. Major 1..... 62

CAROLINA-TEXAS—WEBB

Benavides, Carolina Texas O. & G. 3... abd

COLE FIELD

Benavides, Magnolia Pet. Co. 1 ..... gas
Benavides, John J. O'Hern 2 ..... gas
Benavides, Magnolia Pet. Co. 2 ..... gas

JENNINGS—ZAPATA

Cuellar, Killam-Duggan 8 600
Cuellar, O. W. Killam 16 30
Garza, Buck & Coursey 2 ..... abd

Wells completed 14
Production 877
Dry 3
Gas 5
Gas production 130,000,000

JOE BRUNER FIELD—CALDWELL

Barber, Humble O. & R. Co. 1 ..... abd
Tiller, Humble O. & R. Co. 8 75
Dye, Humble O. & R. Co. 8 300

Wells completed 3
Production 375
Dry 1

BUCHANAN FIELD

Cude, Al Buchanan 1 75

DARST CREEK—GUADALUPE

Mansford, Sun Oil Co. 1 ..... abd
Mansford, Simms Oil Co. (Penn) 2 ..... abd

Wells completed 2
Dry 2

REFUGIO FIELD—REFUGIO

Rea, Houston Oil Co. 2 ..... gas
O'Brien, Houston Gulf Gas Co. 5 ..... gas
Shelly, Houston Gulf Gas Co. 1 150
Vance, Houston Gulf Gas Co. 1 600
Reilly, Karona Oil Co. 2 400
West, Karona Oil Co. 1 500
O'Brien, Mission Drlg. Co. 1 700
Fos heirs, T. P. Morgan 1 420
Refugio, T. P. Morgan 1 1100
Ryals, Oigufer Oil Co. 2 800
Ryals, Oigufer Oil Co. 3 350
Simpson, W. L. Pearson 1 ..... gas
Fos heirs, Saxet Gas Co. 1 850
Heard, Saxet Gas Co. 9 350
Heard, Saxet Gas Co. 10 550
Powers, Saxet Gas Co. 1 950
City of Refugio, Saxet Gas Co. 1 480
Heard, Houston Oil Co. 6 ..... abd
Heard, Houston Oil Co. 8 500
Heard, Houston Oil Co. 12 ..... gas
Cemetery, Dr. H. E. Hewitt 1 400

Wells completed 21
Production 9100
Dry 1
Gas 4
Gas production* 200,000,000

*Production estimated.

AGUA DULCE—NUECES

Kerr, Agua Dulce O. & G. Co. 1 ..... gas
Wolters, Agua Dulce O. & G. Co. 2 ..... gas

Wells completed 2
Gas 2
Gas production 160,000,000

MISCELLANEOUS

Atascosa County—
McCoy, Tom Draper 1 ..... abd

Bastrop County—
Bell, Gulf Prod. Co. 2 ..... abd
Anderson, Sun Oil Co. 1 ..... abd
Yoast, The Texas Co. 8 ..... abd

Bexar County—
Hamilton, Hamilton & Kennon 1 ..... abd

Brooks County—
Allen, Milam Drlg. Co. 6 ..... abd
Garcia, A. W. Dinn B-1 ..... abd
Lasater, Houston Oil Co. ..... gas

Caldwell County—
Hanson, T. C. Hadley 1 ..... abd
Muenster, Smi-Lock Oil Co. 1 ..... abd
Cardwell, H. C. Ratcliff 1 ..... abd

Colorado County—
Root, Coyle-Concord Oil Co. 1 ..... abd

Guadalupe County—
Denman, Shell Pet. Corp. 1 ..... abd
Powers, Carl Bros. 1 ..... abd

Gonzales County—
Ham, Fort Bend Oil Co. 1 ..... abd

Karnes County—
Barnett, G. G. Fisher et al 1 ..... abd

Maverick County—
Chittim, Rycade Oil Co. 3 ..... gas

Milham County—
Johnson & Stiles, Wilson et al 1 ..... abd
Winston, J. W. Stiff 1 ..... abd
Weighmann, J. M. Burkhead 1 ..... abd

Refugio County—
St. John, Blanco Creek Oil Co. 1 ..... abd

San Patricio County—
Freeman, Magnolia Pet. Co. 1 ..... abd
Welder, Houston Gulf Gas Co. 3 ..... abd

Val Verde County—
Doc Everett, Producers Oil Co. 1 ..... abd

Wells completed 20
Production 20
Dry 18
Gas 2
Gas production 49,750,000

EAST CENTRAL TEXAS

Summary of Field Operations

County—	Comp.	Prod.	Abd.	Gas	Rigs	Drg.	Ttl.
Anderson	8	0	7	1	2	4	6
Cherokee	1	0	1	0	0	0	0
Falls	2	0	2	0	0	1	1
Fannin	1	0	1	0	0	0	0
Henderson	3	0	3	0	0	0	0
Hill	4	0	4	0	0	0	0
Limestone	1	0	1	0	0	2	2
McLennan	2	0	2	0	0	0	0
Milam	1	0	1	0	0	2	2
Navarro	1	0	1	0	0	1	1
Rusk	0	0	0	0	0	1	1
Upshur	2	0	2	0	0	0	0
Van Zandt	1	1,800	0	0	0	0	0
Total Oct.	27	1,800	25	1	2	11	13
Total Sept.	6	0	5	1	2	34	36
Difference	21	1,800	20	0	0	23	23

WELLS COMPLETED
ANDERSON COUNTY

Murdock, Kenne et al 1 ..... abd
Blackfoot—Price, Humble Oil & Ref. Co. 1-A ..... abd
Posey Saline—Southern Pine, Humble Oil & Ref. Co. 4 ..... abd
Boggy Creek—Beard, Humble Oil & Ref. Co. 2 ..... gas
Lizzie Smith, Humble Oil & Ref. Co. 4 ..... abd
Purvey, Humble Oil & Ref. Co. 2 ... abd
Neches, Humble Oil & Ref. Co. 2 ... abd
Bethel—Jackson, Pure Oil Co. 1 ..... abd

CHEROKEE COUNTY

Boggy Creek—Elliott & Clark, Humble Oil & Ref. Co. 4-A ..... abd

FALLS COUNTY

Jones, Killiam & Phillips 3 ..... abd
Barclay, Southern Petroleum Co. 1 ... abd

FANNIN COUNTY

Barling, Erwin Petroleum Co. 1 ..... abd

HENDERSON COUNTY

Murray, Humble Oil & Ref. Co. 1 ..... abd
Cox, Humble Oil & Ref. Co. 1 ..... abd
Scott, Humble Oil & Ref. Co .1 ..... abd

HILL COUNTY

Halderman, J. H. Burham 1 ..... abd
Reynolds, Fentress et al 1 ..... abd
Holderman, Sampson et al ..... abd
Clark, Thomas & Bland 1 ..... abd

LIMESTONE COUNTY

Powell, Jensen & Baggett 1 ..... abd

M'LENNAN COUNTY

Roach, Killiam & Phillips 1 ..... abd
Bryant, Killiam & Phillips 3 ..... abd

MILAM COUNTY

Knight, E. L. Chapman 1 ..... abd

NAVARRO COUNTY

Moore, General Oil Co. 1 ..... abd

UPSHUR COUNTY

Wade, Amerada Petroleum Corp. 1 ... abd
Hudspeth, A. M. Wilburn 1 ..... abd

VAN ZANDT COUNTY

Jarman, Pure Oil Co. 1 1800

NORTH CENTRAL TEXAS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Archer	28	705	16	0
Baylor	0	0	2	0
Brown	36	3,750	10	0
Callahan	3	12	2	0
Clay	4	56	1	1
Coleman	25	1,995	13	0
Cooke	22	1,312	10	0
Eastland	12	95	6	2
Erath	3	0	2	1
Grayson	0	0	1	0
Haskell	2	25	1	0
Jack	9	1,054	3	1
Montague	6	180	1	0
Palo Pinto	7	57	5	0
Parker	0	0	2	0
Shackelford	21	160	15	0
Stephens	11	34	7	1
Throckmorton	0	0	1	0
Wichita	48	1,175	16	0
Wilbarger	58	3,595	24	0
Young	47	899	29	0
Total October	342	15,104	167	6
Total September	293	29,502	140	9
Difference	49	14,398	27	3

Summary of Rigs and Wells Drilling

County—	Rigs	S.D.	Drlg.	Ttl.
Archer	7	6	20	33
Brown	9	19	22	50
Callahan	5	6	5	16
Coleman	11	11	21	45
Cooke	5	5	15	25
Clay	1	0	3	4
Eastland	8	13	25	46
Erath	1	5	3	9
Haskell	0	2	0	2
Jack	4	6	21	31
Montague	1	0	3	4
Palo Pinto	2	4	2	8
Shackelford	6	2	14	22
Stephens	2	5	17	24
Throckmorton	0	1	1	2
Wichita	1	2	34	37
Wilbarger	3	23	43	69
Young	7	6	29	42
Miscellaneous	2	19	10	31
Total October	77	135	288	500
Total September	88	137	280	505
Difference	11	2	8	5

WELLS COMPLETED
ARCHER COUNTY

Thompson, P. F. Gwynn et al 6 ..... dry
Richardson-Blk. 12, Prairie O. & G. 2 dry
Wilson-D, Barnsdall Oil Co. 1 60
White, Heydrick & Stump 1 ..... dry
Campbell, Kemrow Prod. Co. 8 5
Llyes, Shappell Oil Co. 11 12
Falls Co. fee, Bridwell Oil Co. 3 14
Harris, L. T. Burns 1 ..... dry
Dominey, Long and The Texas Co. 1 .. dry
Kunkel, M. & V. Oil Co. 1 60
Hausler, Pandem Oil Corp. 1 ..... dry
Kunkel-B, Pet. Prod. Co. et al 10 170
Thompson, Gwynn et al 7 16
McClure, Bridwell Oil Co. 1 ..... dry
Cowan est., Jack Clark 1 ..... dry
Deitrich, Goldsmith et al 1 120
Hennig, Grebin 2 ..... dry
Hausler, Hi-Land Oil Co. 1 ..... dry
Kunkel, Humble O. & R. Co. 8 90
Green-B, Maxson, Jr., 5 ..... dry
Longley est., I. E. Silkwood et al 1 .... dry
Wilson-P, L. T. Burns 1 45
White, L. C. Heydrick and E. J. Stump 2 dry
Ward, Con inental and Underwood 7 ... dry
Falls Co. fee, Cullum and Prairie O. & G. Co. 2 48
Kunkel, M. & V. Oil Co. 2 ..... dry
Lauster-A, Perkins & Cullum 1 ..... dry
Kunkel-B, Pet. Prod. Co. et al 12 65

Completions 28
Production 705
Dry 16

BAYLOR COUNTY

J. J. Gykora, Humphrey et al 1 ..... dry
Portwood, Grisham et al 1 ..... dry

BROWN COUNTY

Edmondson, Amerada Pet. Corp. 3 ..... dry
Miller, Bearman et al 6 25
Kilgore-B, Humble O. & R. Co. 16 54
Duff, Lloyd Oil Corp. 5 2
Cannon, S. B. Owen, Inc., et al 4 30
George, Smith Oil Co. 6 300
Kessler, The Texas Co. 4 254
Kessler, The Texas Co. 5 300
Hickman, Ven-Mex Oil Co. of Tex. 7 .. dry
Bush, American-Maracaibo Co. 18 8
Miller-Spencer, Bearman et al 5 30
Munselle, Buder, tr., 4 25
Johnson, Humble O. & R. Co. 1 25
Reeves, Prairie O. & G. Co. 1 ..... dry
Williams, Prairie O. & G. Co. 11 ..... dry
Kessler, E. L. Smith Oil Co. 1 25
Trueheart, E. L. Smi h Oil Co. 4 25
Kessler, The Texas Co. 7 330
Hickman-D, Ven-Mex Oil Co. 7 20
Henderson, Lloyd et al 1 ..... dry
Kessler, S. A. Buder 2 175
Kessler, S. A. Buder 3 432
Belvin, P. French 3 76
George, E. L. Smith Oil Co. 8 300
White hrs., Baker Bros. 3 ..... dry
Kessler, Buder 4 250
Dunn, Davies Hall 1 ..... dry
Cannon-B, Anna B. Gordan 1 ..... dry
Layman, Herring et al 1 ..... dry
Kilgore-A, Humble O. & R. Co. 5 10
Cannon, S. B. Owens, Inc., et al 5 20
Shore, Paramount Oil Royalty Co. 1 ... dry
George, E. L. Smith Oil Co. 9 520
Kessler, The Texas Co. 8 260
Kessler, The Texas Co. 9 235
Kilgore, Young Bros., Alexander et al 12 15

Completions 36
Production 3750
Dry 10

CALLAHAN COUNTY

Powell, McClanahan and Eastland Oil 1 dry
Berry, Moutray Oil Co. 1 ..... dry
Johnson et al, Mook-Texas Oil et al 2 .. 12

Completions 3
Production 12
Dry 2

CLAY COUNTY

Evans et al, R. T. Belcher et al 5 22
Stine et al, Lone Star Gas Co. 22 34
Evans et al, Mid-Cont. Holding Co. 2 gas
Myers, L. C. Hivick et al 2 ..... dry

Completions 4
Production 56
Dry 1
Gas 1
Gas production 1,700,000

COLEMAN COUNTY

Vaughn, C. S. Wilmot 3 ..... dry
Weaver, Broderick & Calvert 3 ..... dry
Buck, Midwest Explin. Co. 1 ..... dry
Young, Mission, St. John & Simms 1 .. dry
Curry, S. B. Owens, Inc. 1 ..... dry
Morris, White Eagle O. & R. Co. 6 450
Morris, White Eagle O. & R. Co. 8 150
Crump, Charter Oil Co. 5 ..... dry
Baker, Rex-Tex and Py-Tex Oil Co. 2 .. 10
Moody, Stepp & Keister 5 ..... dry
Morris, Stepp & Keister 1 ..... dry
Tholl Oil Co., Anzac and Atlantic O. P. Co. 1 ..... dry
Roper, Eppler et al 1 ..... dry
Crowder, Eastland Oil Co. 1 100
Keeney-C, Eastland Oil Co. 1 ..... dry
Keeney, Midwest Explin. Co. 5 35
Morris, Levi Smith 3 150
Crowder, Tower & McKanna 2 150
Crowder, Tower & McKanna 4 400
Morris, White Eagle, O. & R. Co. 7 150
Morris, White Eagle O. & R. Co. 12 ... 125
Morris, White Eagle O. & R. Co. 16 ... 150
Morris, White Eagle O. & R. Co. 24 ... 125
Pfluger, R. Kamon 1 ..... dry
Bingham, Shallcross Oil Corp. et al 1 .. dry

Completions 25
Production 1995
Dry 13

COOKE COUNTY

J. L. Newman, Lloyd Oil Corp. 1 ..... dry
Hess, Benson Bros. 1 16
Huggins, Danciger O. & R. Co. 8 140
Timmis, Kewanee O. & G. Co. 9 517
Field & Bowers, Shell Pet. Corp. 6 70
Huggins, Danciger O. & R. Co. 8 140
Poteet, Humble O. & R. Co. 6 39
Paulter, Benson Bros. 1 ..... dry
Huggins, Danciger O. & R. Co. 9 100
Huggins, Danciger O. & R. Co. 10 80
Field & Bowers, Danciger & Staniforth 1 dry
Poteet, Humble O. & R. Co. 2 44
Timmis-B, Kewanee O. & G. Co. 7 135
Field & Bowers, Shell Pet. Corp. 5 ..... dry
Embry, Sinclair O. & G. Co. 1 ..... dry
Embry, The Texas Co. 2 ..... dry
Huggins, Coline Oil Co. 3 28
Huggins, Danciger O. & R. Co. 11 33
Shiflett, Hoosier and The Texas Co. 1 .. dry
Hunt, C. C. Lanier et al 1 ..... dry
Harris, McElreath & Suggett 1 ..... dry
Hyman, Thornton-Taubert Oil Co. 1 ..... dry

Completions 22
Production 1312
Dry 10

EASTLAND COUNTY

Adams, Brannon & Murray 1 ..... gas
Higginbotham, T. P. C. & O. Co. 5 .. dry
Cunningham-B, Dyar Bros. 2 ..... dry
Alexander, Chestnut & Smith Corp. 1 .. 50
Foster-B, Hoffman & Page Co. 3 20
Clements, Kokomo & Phillips 1 ..... dry
Murrell, Anna Bell Oil Co. 1 ..... dry
League, Lone Star Gas Co. 2 ..... gas
Murrell, Texwa Oil and Kirk 1-A 8
Harbin, Arab Gasoline and Teatsorth 2 17
Simmons, Conway Bros. and Champion 6 dry
Collin, Gholson et al 1 ..... dry

Completions 13
Production 95
Gas 2
Dry 4

ERATH COUNTY

Wyatt, Culberson Bros. 1 ..... dry
Fulfer, Peters et al 1 ..... gas
Robertson, Stone et al 1 ..... dry

Completions 3
Gas 1
Dry 2

GRAYSON COUNTY

D. E. Bryant, F. H. E. Oil Co. 1 ..... dry

HASKELL COUNTY

Roberts, Barnsdall Oil Co. 1 ..... dry
Reynolds, Superior Oil Corp. 7 25

Completions 2
Production 25
Dry 1

JACK COUNTY

Loving-B, Bryson O. & G. Co. 1 356
Bryson, Prairie O. & G. Co. 6 280
Bryson, Prairie O. & G. Co. 2 ..... dry
Ezell, L. C. Harper 3 245
Jones, Kiser & Duffey 1 ..... dry
Bryson, Prairie O. & G. Co. 5 86
Loving, T. G. Shaw interests 1 ..... dry
Box, L. C. Harper 5 87
Clayton, McGuire 1 ..... gas

Completions 8
Production 1054
Dry 3
Gas 1
Gas production 11,500,000

MONTAGUE COUNTY

Edmondson, Bridwell Oil Co. 8 45
Bryant est., Reynolds Drlg. Co. 1 ..... dry
Cunningham et al-A, Farlyn Oil Co. 3 .. 16
Salmon, Archer Drlg. Co. et al 1 12
Salmon, Archer Drlg. Co. et al 2 65
Edmondson, Bridwell Oil Co. 9 42

Completions 6
Production 180
Dry 1

PALO PINTO COUNTY

Dalton, Dal.on Oil Co. 7 ..... dry
Owens, Nelson Oil Synd. 1 ..... dry
Costello, Bolin & Lindsey 3 27
Perkins, Hughes et al 1 ..... dry
Weldon, Rheinhart Bros. 1 ..... dry
Costello, Stiff Oil Co. 1 ..... dry
Stuart et al, T. P. C. & O. Co. 161 30

Completions 7
Production 57
Dry 5

PARKER COUNTY

Womack, W. P. Chancellor 1 ..... dry
Johnson, McCoy et al 1 ..... dry

SHACKELFORD COUNTY

Dawson et al, French et al 1 ..... dry
Jenkins, Kiser & Grace 1 ..... dry
Newell, Merry Bros. & Perrini et al 1 .. dry
Jenkins, Moutray Oil Co. 1 ..... dry
Nail, S. B. Owens, Inc. 1 ..... dry
Nail, Roeser & Pendleton 1 ..... dry
Newell, Tannehill et al 25 30
Ma.thews-A, Vacuum Oil Co. 6 60
Ackers, Wells et al 1 ..... dry
Hill, Ackerman & Sorlven 1 ..... dry
Davis, A. J. Hughes 1 ..... dry
Davis, F. C. Morton 1 ..... dry
Titus-C, Roeser & Pendleton and Humble 1 5
Harvey (Sec. 8), J. K. Simmons 1 ..... dry
Matthews, Slicker, Homer 5 5
Newell, Tannehill et al 26 50
Nail, Basom et al 1 ..... dry
Russ-Webb, Big State Oil Co. 13 ..... dry
Todd, Caperton 1 ..... dry
Simpson, Gibson & Johnson 1 10
King, Richardson Bros. & Callahan 1 .. dry

Completions 21
Production 160
Dry 15

STEPHENS COUNTY

Lee, Prairie O. & G. Co. 3 ..... dry
Jackson, Clark et al 2 ..... dry
McClure, Conway Bros. 1 ..... dry
Smith, Loftin, Jordan et al 1 ..... gas
Townsend, Lone Star Gas Co. 1 ..... dry
Jackson, McLaran et al 1 ..... dry
Corbett, Mesa Oil Co. 1 ..... dry
Storm, Chestnut & Smith Corp. 1 ..... dry
Litton, J. B. Dale 3 3
Sikes, States Oil Corp. 5 26
Redwine hrs., Striplin 1 5

Completions 11
Production 34
Dry 7
Gas 1
Gas production 3,850,000

THROCKMORTON COUNTY

Upshur County School Land, Shappell Oil Co. 4 ..... dry

WICHITA COUNTY

Roller, Ascot Co. 46 2
Roller, Ascot Co. 47 3
Roller, Ascot Co. 48 2
Warren, Balyea et al 1 ..... dry
Dutton, Griswold 1 ..... dry
Chilson, Hi Land Oil Co. 2 84
Crudup-B, Star Drilling Co. 1 73
McClure, F. Blair et al 1 19
Bishop, Comac and Prairie 10 47
Love, Continental Oil and Pet. Prod. 2. dry
Honaker, L. L. Donnell et al 1 ..... dry
Reis, W. C. Forbess 1 ..... dry
Duke, J. M. Hemby 1 ..... dry
Duke, J. M. Hemby 2 2
Duke, J. M. Hemby 3 3
Duke, J. M. Hemby 4 2
Waggoner Bros.-C, T. F. Hunter 2 56
Waggoner Bros.-C, T. F. Hunter 7 55
W. E. Crow, Kimbell & Bostic 8-A 5
Allen, Magnolia Pet. Co. 53 ..... dry
E. McBurney, Geo. W. Maywood 2 5
E. McBurney, Geo. W. Maywood 3 3
Mitchell-B, White Bros. & Jackson 3 ... 85
Mitchell-B, White Bros. & Jackson 9 ... 100
Burnett et al, Akin & Rayzor 2 ..... dry
Kennedy-A, R. R. Clark et al 1 5
Logan et al, Jno. A. Dixon 1 ..... dry
Waggoner Bros.-C, Hunter 3 20
Ramming, Magnolia Pet. Co. 7 5

Pace, Omohundro 23 30
Burnett-A, Panhandle Ref. Co. 9 25
Burnett-A, Panhandle Ref. Co. 10 ..... dry
Waggoner Bros., J. G. Rowe et al 3 ..... dry
McClure, Rubsam & Hunter 17 8
McClure-B, Rubsam Hunter et al 12 ..... dry
Whittenbach, Sheldon and VenMex 2 20
Waggoner, Turman Oil Co. 15 45
Allen & Kemp-F, United Prod. et al 4 35
Crudup, Hi-Land Oil Co. 2 45
Rhoades, Mid-Continent Hold. Corp. 5 ..... dry
Parker, J. L. Swanner 1 ..... dry
Kemp & Kemper, Ark. Fuel Oil Co. 20 252
McClure, Cunningham & Pennell 5 25
Douglas-B, Douglas Prod. Co. 11 ..... dry
Waggoner Bros., VenMex Oil Co. 21 35
Waggoner Bros., VenMex Oil Co. 22 50
Gibson, Alberta Oil Co. 1 ..... dry
Kemp & Kemper, Ark. Fuel Oil Co. 21 35

Completions 48
Production 1175
Dry 16

WILBARGER COUNTY

Waggoner-I, Burton 5 40
Waggoner-D, Derby Oil Co. 1 ..... dry
Waggoner-A, Empire G. & F. Co. 11 97
Waggoner-C, Empire G. & F. Co. 13 99
Waggoner-G, Staley-Wynne & Co. 13 142
Waggoner-A, Empire G. & F. Co. 12 150
Waggoner-B, Empire G. & F. Co. 21 220
Waggoner-B, Empire G. & F. Co. 22 200
Waggoner-C, Empire G. & F. Co. 14 150
Waggoner-C, Empire G. & F. Co. 15 112
Waggoner-L, Fain-McGaha Oil Corp. 8 80
Waggoner-W, Fain-McGaha Oil Corp. 10 100
Waggoner-K, Golding & Cochran et al 2 ..... dry
Waggoner-L, Fain-McGaha Oil Corp. 8 80
Waggoner-Jones, Grayback Dev. Co. 1 ..... dry
Waggoner-Sec. 22, Harris et al 1 ..... dry
Waggoner-A, Lewis Prod. Co. 11 50
Waggoner-B, Lewis Prod. Co. 6 ..... dry
Waggoner, Robert Oil Corp. 2 70
Waggoner-A, Shell Pet. Corp. 4 24
Waggoner-B, Staley-Wynne & Co. 6 85
Waggoner-R, Staley-Wynne & Co. 2 70
Melton, Staley-Wynne & Co. 1 ..... dry
Waggoner-E. P. Waggoner 2 75
Waggoner-E. P. Waggoner 3 ..... dry
Waggoner-J, Waggoner Ref. Co. 10 ..... dry
Waggoner-J, Waggoner Ref. Co. 11 102
Waggoner-I, Burton et al 6 60
Waggoner-B, Dixie Oil Co. 1 40
Waggoner-C, Dixie Oil Co. 1 ..... dry
Waggoner-A, Easter Oil Co. 5 10
Waggoner-E, Easter Oil Co. 2 ..... dry
Waggoner-A, Empire G. & F. Co. 13 148
Waggoner-C, Empire G. & F. Co. 2 ..... dry
Waggoner-Daniel, Grayback Dev. Co. 1 153
Waggoner, Sec. 109, Harris e. al 1 ..... dry
Waggoner-A, Lawson 7 140
Waggoner, Loenthall & Dyson 1 ..... dry
Waggoner-Norwood, Phillips Pet. Co. 6 95
Waggoner-G, Staley-Wynne & Co. 14 140
Waggoner-B, Bass Dillard & Simms 1 ..... dry
Waggoner-S, Consolidated Oil Co. 1 ..... dry
Waggoner-A, Empire G. & F. Co. 14 160
Waggoner-L, Fain McGaha Oil Corp. 13 110
Waggoner-W, Fain McGaha Oil Corp. 18 150
Waggoner, Ferguson et al 1 ..... dry
Castleberry, Hemisphere Oil Co. 1 ..... dry
Watts, Rathke Oil Co. 1 ..... dry
Waggoner-B, Staley Wynne & Co. 7 90
Waggoner-F, Staley Wynne & Co. 8 140
Waggoner-M, Staley Wynne & Co. 1 148
Waggoner, Sumner & Massie 1 ..... dry
Waggoner-D, The Texas Co. 1 85
Waggoner-F, VenMex Oil Co. 1 60
Waggoner-G, (formerly A), VenMex Oil Co. 1 ..... dry
Waggoner-O, Waggoner Ref. Co. 1 ..... dry
Waggoner, Wichison Oil Corp. 2 ..... dry
Waggoner-A, Wilbarger Oil Co. 4 ..... dry

Completions 58
Production 3595
Dry 24

YOUNG COUNTY

Kunkel, Panhandle Ref. Co. et al 1 ..... dry
Edwards, Sharp et al 1 ..... dry
Petty, Smor Oil Co. e. al 1 ..... dry
Clark, Allday et al 1 ..... dry
Cullers, Bridwell Oil Co. 1 10
Cullers, Bridwell Oil Co. 2 30
Campbell, Continental and Underwood 3 39
Hill, Fowler et al 1 45
Dean, Holbrook & Woods 3 8
Farmer-A, Panhandle Ref. Co. 1 ..... dry
Prideaux-D, Panhandle Ref. Co. 1 10
Prideaux-D, Panhandle Ref. Co. 2 80
Lemmond, Perkins & Cullum 3 192
Shatto, Riggs & Williams 1 ..... dry
Bailey, The Texas Co. et al 1 ..... dry
Allen, Paull Oil Co. 7 17
Neeley, Bowen et al 1 ..... dry
Cullers, Bridwell Oil Co. 3 10
Cullers, Chandler et al 1 ..... dry
Hausler, Comac Drlg. Co. 1 ..... dry
Campbell-B, Continental Oil Co. 10 ..... dry
Hargroves, Goldsmith et al 1 ..... dry
Dean, Holbrook & Woods 4 3
Barrett, Harland & Carter 1 ..... dry
Deirich, Madden & Hunt 1 ..... dry
Kunkel, Madden & Hunt 1 20
Carpenter, Parks et al 6 ..... dry
Senkel, Riggs & Williams 1 ..... dry
Deitrich, Sun Oil Co. 12 135
Kunkel, United Prod. Co. 1 ..... dry
Wellen, Willis & Gatewood 1 ..... dry
Cullers, Wise & Jackson 2 50
Kisinger-A, Shaw et al 1 50
Johnson, Bundy et al 1 ..... dry
Richardson, Franklin 1 ..... dry
Hoffman, Moran et al 1 ..... dry
Prideaux-D, Panhandle Ref. Co. 3 ..... dry
Cullers, Parks et al 1 20
Lemmond, Perkins & Cullum 4 ..... dry
Larimore, Terrell 1 ..... dry
Barrett-A, Trinity Oil Co. 2 5
Williams, Trio Oil Co. 1 ..... dry
Williams, Trio Oil Co. 2 ..... dry
Foster, Young et al 1 ..... dry
Carter, Cochran et al 1 ..... dry
Jarnigan, Shaw et al 1 175
Hockaday, United Roy. et al 1 ..... dry

Completions 47
Production 899
Dry 29

WEST TEXAS FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Brewster	0	0	1	0
Crane	3	634	1	0
Crockett	3	519	1	0
Fisher	2	14	1	0
Garza	1	50	0	0
Glasscock	4	2,060	2	0
Howard	19	5,474	3	0
Irion	0	0	1	0
Jones	0	0	1	0
Loving	1	80	0	0
Reagan	7	700	1	0
Pecos	26	43,838	14	0
Presidio	0	0	1	0
Runnels	0	0	1	0
Taylor	1	336	1	0
Upton	4	613	1	0
Val Verde	0	0	1	0
Ward	1	155	0	0
Winkler Coun.y	9	881	4	0
Total October	81	55,354	35	0
Total September	78	274,436	32	3
Difference	3	219,082	3	3

Summary of Rigs and Wells Drilling

County—	Rigs	S.D.	Drlg.	Ttl.
Crane	2	0	11	13
Crockett	1	2	3	6
Fisher	1	1	7	9
Glasscock	6	3	13	22
Howard	12	5	33	50
Irion	2	2	8	12
Jones	0	1	4	5
Pecos	27	22	62	111
Reagan	2	0	6	8
Runnels	0	0	1	1
Upton	1	0	6	7
Ward	1	5	11	17
Winkler	0	2	4	6
Miscellaneous	6	32	38	76
Total October	61	75	207	343
Total Sep.ember	72	75	193	340
Difference	11	0	14	3

WELLS COMPLETED
BREWSTER COUNTY

Jackson & Harmon, Johnson & Weekley 1 ..... dry

CRANE COUNTY

Duoll University, Church & Fields 3 50
University-A, Simms & Atlantic 10 160
University-L, Tidal Oil Co. 10 424
Waddell, Gulf Prod. Co. 8 ..... dry

Completions 3
Production 634
Dry holes 1

CROCKETT COUNTY

J. M. Shannon-Powell, Young & Donnelly 1 394
L. P. Powell, Taylor-Link Oil Co. 1 125
Massie, Young & Donnelly 1 ..... dry

Completions 3
Production 519
Dry holes 1

FISHER COUNTY

Brown, Cranfill & Reynolds 1 14
Griffin, Mesa Oil Co. 1 ..... dry

Completion 2
Production 14
Dry holes 1

GARZA COUNTY

J. M. Boren, Paul Steed 1 50

GLASSCOCK COUNTY

J. J. Phillips, Schermerhorn Oil Co. 1 1398
Hart Phillips, Sun Oil Co. 1 662
L. S. McDowell, Houston Oil Co. et al 1 ..... dry
W. P. Edwards, Midwest Explin. Co. 1 ..... dry

Completions 4
Production 2060
Dry holes 2

HOWARD COUNTY

Otis Chalk-C, Continental Oil Co. 5 75
A. J. Hooks, Godley Oil Co. 16 165
Kloh et al, Howard County Oil Corp. 2. 60
H. R. Clay, Simms Pet. Co. 2 ..... dry
Dora Roberts, Ward Oil Co. 12 85
Hooks, Bristow & Merrick 9 75
Dora Roberts, Schermerhorn Oil Co. 5 ..... dry
Kloh & Rumsey, Shell Pet. Corp. 1 550
Settles-B, Shell Pet. Corp. 1 581
Hooks, Godley Oil Co. 6 65
Dora Roberts-B, Moody Corp. 30 120
Dora Roberts, Sprague Oil Co. 2 ..... dry
Dora Roberts, Lse. 1, The California Co. 3 500
Kloh & Rumsey, Continental Oil Co. 3 1626
Kloh et al, Howard Co. Oil Corp. 3 1000
Dora Roberts, Schermerhorn Oil Co. 6 60
Dora Roberts, Ward Oil Co. 13 237
Dora Roberts, Ward Oil Co. 14 175
Kloh & Rumsey, Witherspoon et al 3 100

Completions 19
Production 5474
Dry holes 3

IRION COUNTY

J. M. Nutt, Fuhrman Pet. Corp. 1 ..... dry

JONES COUNTY

Bickley, Cosden-Herbert et al 3 ..... dry

LOVING COUNTY

W. S. Hazell, Lockhart & Co. 1 80

REAGAN COUNTY

University, Big Lake Oil Co. 167 50
University, Big Lake Oil Co. 168 100
University, Big Lake Oil Co. 169 100
University, Big Lake Oil Co. 170 175
University, Big Lake Oil Co. 172 175
University, Big Lake Oil Co. 173 100
Grp. 1 University, Texon Oil & Land Co. 61 ..... dry

Completions 7
Production 700
Dry holes 1

PECOS COUNTY

University-B, Landreth Prod. and World Oil Co. 1 120
I. G. Yates-A, Mid-Kansas O. & G. Co. 31 8640
Mrs. F. E. Forborg, Geo. B. Morgan 1 .. 15
T. S. Jackson, Shell Pet. Corp. 1 ..... dry
University, Taylor-Link Oil Co. 3 261
Mrs. M. A. Smith, Lease 1, Sec. 23, The California Co. 8 8400
I. G. Yates, Lease 1, Sec. 34, The California Co. 20 25,200
University, Tidal Oil Co. 2 ..... dry
W. A. Sanford, Clayton Williams et al 1 dry
University-A, Continental Oil Co. 1 200
J. A. McDonald, Independent O. & G. Co. et al 1 196
J. A. McDonald-A, Landreth Prod. Corp. 1 ..... dry
Louis Peterson, Perren et al 1 ..... dry
J. M. Montgomery, Ditto Oil Co. 1 .... dry
W. Courtney, Phillips Pet. Co. 1 ..... dry
Mrs. M. A. Smith, Humble O. & R. Co. 11 351
J. A. McDonald, Independent O. & G. Co. et al 2 ..... dry
J. H. Tippett, McMan O. & G. Co. 5 240
Mrs. M. A. Smith, Mid-Kansas O. & G. Co. 6 15
University (Sec. 27), W. A. Moncrief et al 1 ..... dry
University, Shell Pet. Corp. and Kirby 1 dry
University, Sun Oil Co. 2 ..... dry
University (Carlson), Sun Oil Co. 1 .... dry
University, Taylor-Link Oil Co. 4 200
McDonald, Tidal Oil Co. 1 ..... dry
State Hale-A, Gulf Prod. Co. 1 ..... dry

Completions 26
Production 43,838
Dry holes 14

PRESIDIO COUNTY

Tootle estate, Phillips Pet., Empire, Delmar and C. E. Miller 1 ..... dry

RUNNELS COUNTY

Currie, Herbert Oil Co. 1 ..... dry

TAYLOR COUNTY

Brockerson, Condor Pet. Co. 1 ..... dry
Hunter, Dunigan & Shell 1 336

UPTON COUNTY

A. S. Burleson, Dixie Oil Co. 31 178
A. J. McQuarters, Prairie O. & G. Co. 1. dry
R. Ricker, Humble O. & R. Co. 12 70
J. F. Lane-A, T. P. Coal & Oil Co. 12 .. 365

Completions 4
Production 613
Dry holes 1

VAL VERDE COUNTY

W. E. Wilson, Dyar Bros. et al 1 ..... dry

WARD COUNTY

O'Brien et al, Gulf Prod. Co. 6 155

WINKLER COUNTY

J. R. Carter, Flandell & Co. 1 ..... dry
Ida Hendrick-B, American Maracaibo Co. 2 60
Ida Hendrick, Atlantic Oil Prod. Co. 6.. 351
Scarborough, Shell Pet. Corp. et al 7 .. 90
T. G. Hendrick, Skelly Oil Co. 6 53
Kloh & Rumsey, Texas Canadian Oil Co. 1 ..... dry
Grisham-Hunter-B, Texas State Oil Co. et al 1 ..... dry
E. G. Hutchings T-90, Southern Crude O. P. Co. 2 ..... dry
Hendrick-C, Cranfill & Reynolds 2 327

Completions 9
Production 881
Dry holes 4

GULF COAST FIELDS

Summary of Field Operations
Texas

Field—	Comp.	Prod.	Abd.	Gas	Rigs	Drg.	Ttl.
Barbers Hill	14	10,700	4	0	4	25	29
Batson	2	33	0	0	0	1	1
Big Creek	1	3,500	0	0	0	3	3
Boling	3	0	3	0	0	1	1
Blue Ridge	2	80	0	0	0	4	4
DeWalt	6	3,260	0	0	2	7	9
Goose Creek	3	20	1	0	0	4	4
High Island	3	500	0	0	0	3	3
Hull	11	5,075	2	0	0	7	7
Humble	10	6,903	3	0	2	15	17
Liberty	8	4,600	2	0	2	8	10
Nash	0	0	0	0	0	1	1
North Dayton	1	0	1	0	0	0	0
Orange	2	10	1	0	0	2	2
Orchard	0	0	0	0	0	1	1
Pierce Junction	7	2,400	1	0	1	9	10
Raccoon Bend	18	5,900	1	0	10	18	28
Refugio	20	6,347	1	3	8	29	37
Sour Lake	1	200	0	0	0	2	2
Spindletop	12	5,650	4	0	0	8	8
West Columbia	2	600	1	0	1	3	4
Miscellaneous	26	7,850	19	0	7	39	46
Total Oct.	150	63,628	44	3	37	190	227
Total Sept.	81	28,463	29	4	29	182	211
Difference	69	35,165	15	1	8	8	16

South Louisiana

Field—	Comp.	Prod.	Abd.	Gas	Rigs	Drg.	Ttl.
Anse La Butte	0	0	0	0	0	1	1
Bayou Bouillon	1	0	1	0	0	1	1
Edgerly	1	15	0	0	0	3	3
Hackberry	6	2,500	2	0	2	10	12
Jennings	0	0	0	0	0	6	6
Lockport	2	0	1	1	0	1	1
Sorrento	0	0	0	0	0	1	1
Starks	0	0	0	0	0	2	2
Sulphur	3	5,900	0	0	0	3	3
Sweet Lake	0	0	0	0	1	1	2
Vinton	4	1,630	1	0	0	3	3
Miscellaneous	15	1,940	11	1	10	24	34
Total Oct.	32	11,985	16	2	13	56	69
Total Sept.	20	8,275	6	0	20	51	71
Difference	12	3,710	10	2	7	5	2
Grand total Oct.	182	75,613	60	5	50	246	296
Grand total Sept.	101	36,738	35	4	49	233	282
Difference	81	38,875	25	1	1	13	14

GULF COAST
TEXAS
WELLS COMPLETED

Barber, Mills Bennett Prod. Co. 1 ..... abd
Barrow, Mills Bennett Prod. Co. 7 ..... abd
Woodward, D. B. McDaniel 1 730
Wilburn, Grayburg Oil Co. 1 1000
Kirby, Humphreys Corp. 4-H 1800
Kirby, Humphreys Corp. 5-H 1150
Kirby, Humphreys Corp. 6-H 1800
Wilburn, Sinclair O. & G. Co. 1 380
McKinney, Sinclair O. & G. Co. 1 .... abd
McKinney, Sun Oil Co. 1 350
Hooks-Collier, Superior Oil Corp. 1 ... 900
Hooks-Collier, Superior Oil Corp. 2 ... 700
Kirby, Yount Lee Oil Co. 1 ..... abd
Woodward, Yount Lee Oil Co. 2 1890

Wells completed 14
Production 10700
Abandoned 4

BATSON—HARDIN COUNTY

King, The Beaux 1 30
Millholme, Hill & Dowell 99 3

Wells completed 2
Production 33

BOLING—FORT BEND AND WHARTON

E. C. Farmer, Sun Oil Co. 8 ..... abd
Pleasants, The Texas Company 2 ..... abd
Taylor, Vacuum Oil Co. 3 ..... abd

Wells completed 3
Production 0
Abandoned 3

BIG CREEK—FORT BEND COUNTY

Davis, Gulf Prod. Co. 56 3500

BLUE RIDGE—FORT BEND COUNTY

Blakely, Cunningham Prod. Co. 2 30
West-Schenck, Moody Corp. 3 50

Wells completed 2
Production 80

DEWALT—FORT BEND COUNTY

Camp, Humble Oil & Ref. Co. 8 600
Deatherage, Humble Oil & Ref. Co. 3.. 270
Bankers Mortgage, Humble Oil & Ref. Co. 2-A 500
Brazos, Humble Oil & Ref. Co. 7 860
Hamner, Humble Oil & Ref. Co. 6 400
Nelson, Humble Oil & Ref. Co. 6 630

Wells completed 6
Production 3260

GOOSE CREEK—HARRIS COUNTY

Simms-Smith, Humble Oil & Ref. Co. 75 abd
Scott, Lee & Scott 3 10
Addey, Jim McMurry 3 10

Wells completed 3
Production 20
Abandoned 1

HIGH ISLAND—GALVESTON COUNTY

Cade, Marrs McLean 15 500

HULL—LIBERTY COUNTY

Barngrover, Empire Gas & Fuel Co. 27. 800
Hooks-Spell, Humble O. & R. Co. 11 .. 300
Dolbear, Republic Prod. Co. 99 1000
Dolbear, Republic Prod. Co. 109 300
Dolbear, Republic Prod. Co. 119 125
Dolbear, Republic Prod. Co. 128 ..... abd
Carr, Sun Oil Co. 12 ..... abd
Bangrover, Houston Prod. Co. 13 1150
Phoenix, Gulf Prod. Co. 45 800
Phoenix, Gulf Prod. Co. 52 800

Wells completed 11
Production 5075
Abandoned 2

HUMBLE—HARRIS COUNTY

Wagner, Continental Oil Co. 1 ..... abd
Williams, Humble O. & R. Co. 4 240
La. Oil, Navarro Oil Co. 1 ..... abd
Rosenthal, Harvey Smith 1 100
Morris, So. Texas Pet. Co. 10 750
River, Sun Oil Co. 47 ..... abd
Landslide, The Texas Company 266 40
Landslide, The Texas Company 267 73
Landslide, The Texas Company 268 1000
Landslide, The Texas Company 269 4700

Wells completed 10
Production 6903
Abandoned 3

LIBERTY—LIBERTY COUNTY

Goggan, Empire Gas & Fuel Co. 4 .... abd
Goggan, Empire Gas & Guel Co. 5 .... abd
Goggan, Empire Gas & Fuel Co. 6 1200
Community, Navarro Oil Co. 3 100
Mitchell, Sun Oil Co. 48 900
Mitchell, Sun Oil Co. 49 1000
Mitchell, Sun Oil Co. 51 1200
Mitchell, Yount Lee Oil Co. 18 200

Wells completed 8
Production 4600
Abandoned 2

NORTH DAYTON—LIBERTY COUNTY

Ballarack, Fort Bend Oil Co. 1 ..... abd

ORANGE—ORANGE COUNTY

Mose—Granger, Gulf Prod. Co. 1 ..... abd
Gailliere, Sinclair Oil & Gas Co. 5 10

Wells completed 2
Production 10
Abandoned 1

PIERCE JUNCTION—HARRIS COUNTY

Ritter, Abercrombie & Harrison 1 1000
Whitehead, Anderson & Plummer 3 50
Cain, Navarro Oil Co. 4-A ..... abd
Settegast, Rio Bravo Oil Co. 7-A 100
Settegast, Rio Bravo Oil Co. 14-A 300
Herman, Saxet Oil Co. 4 900
Dooley, T. G. Shaw 2 50

Wells completed 7
Production 2400
Abandoned 1

RACCOON BEND—AUSTIN COUNTY

Bracey, Humble O. & R. Co. and Valley Oil Corp. 3-A 400
Bellville, Humble O. & R. Co. and Valley Oil Corp. 3-A ..... abd
Wilson, Humble O. & R. Co. and Valley Oil Corp. 2 295
Saunders, Humble O. & R. Co. and Valley Oil Corp. 4 390
Walton, Humble O. & R. Co. and Valley Oil Corp. 4-A 500
Walton, Humble O. & R. Co. and Valley Oil Corp. 5-A 180

Graneau, Humble O. & R. Co. and Valley Oil Corp. 1 20
Mueller, Humble O. & R. Co. and Valley Oil Corp. 3 275
Mueller, Humble O. & R. Co. and Valley Oil Corp. 4 300
Mueller, Humble O. & R. Co. and Valley Oil Corp. 5 600
Diemer, Humble O. & R. Co. and Valley Oil Corp. 1 370
Payne, Humble O. & R. Co. and Valley Oil Corp. 3 300
Grawunder, Humble O. & R. Co. and Valley Oil Corp. 2-C 700
Grawunder, Humble O. & R. Co. and Valley Oil Corp. 3-C 420
Urban, Humble O. & R. Co. and Valley Oil Corp. 4 200
Helmuth, Humble O. & R. Co. and Valley Oil Corp. 2 250
Woodley, Humble O. & R. Co. and Valley Oil Corp. 3 450
Dietrichs, Humble O. & R. Co. and Valley Oil Corp. 5-B 150

Wells completed 18
Production 5900
Abandoned 1

REFUGIO—REFUGIO COUNTY

Rooke, Benedum & Trees 3 ..... abd
O'Brien, Houston Gulf Gas Co. 5 ..... gas
Morgan-Shelly, Houston Gulf Gas Co. 1 140
Fannie Heard, Houston Oil Co. 6 20
Wilson Heard, Houston Oil Co. 8 490
F. Rooke, Houston Oil Co. 2 ..... gas
F. B. Rooke, Houston Oil Co. 13 300
West, Korona Oil Co. 1 600
Reilly, Korona Oil Co. 2 132
Reilly, Korona Oil Co. 3 75
O'Brien, Mission Drilling Co. 1 20
Strauch, Mission Drilling Co. 1 500
Fox, Mission Drilling Co. 2 ..... gas
City, Morgan Oil Corp. 2 250
Fox, Morgan Oil Corp. 1 420
Swift, Pearson Properties 1 450
Simpson, Pearson Properties 1 800
Powers, Saxet Oil Co. 1 1200
Fox, Saxet Oil Co. 1 600
Clint Heard, Saxet Oil Co. 10 350

Wells completed 20
Production 6347
Abandoned 1
Gas 3

SOUR LAKE—HARDIN COUNTY

Brown, H. M. Terry 1 200

SPINDLETOP—JEFFERSON COUNTY

McFaddin, Unity Oil Co. 100 ..... abd
McFaddin, Yount Lee Oil Co. 61 150
McFaddin, Yount Lee Oil Co. 70 1400
McFaddin, Yount Lee Oil Co. 75 1300
McFaddin, Yount Lee Oil Co. 74 1000
McFaddin, Yount Lee Oil Co. 113 800
McFaddin, Yount Lee Oil Co. 114 ..... abd
McFaddin, Yount Lee Oil Co 117 506
Gladys City, Yount Lee Oil Co. 58 600
Gladys City, Yount Lee Oil Co. 44 ..... abd
Gladys City, Yount Lee Oil Co. 95 ..... abd
Fee, Yount Lee Oil Co. 24 900

Wells completed 12
Production 5650
Abandoned 4

WEST COLUMBIA—BRAZORIA COUNTY

Masterson, W. L. Pearson 1 ..... abd
Hogg, Saxet Oil Co. 1 600

Wells completed 2
Production 600
Abandoned 1

MISCELLANEOUS TEXAS

Austin County—
Brenham—Schurenburg, Butler & Calhoun 5 ..... abd
Chambers County—
Fitzgerald, Layne et al 1 ..... abd
Lost Lake—Mayes, Pure Oil Co. 1 700
Colorado County—
Root, Coyle & Concord 1 ..... abd
Brandon, Humble O. & R. Co. 2 ..... abd
Miller, Humble O. & R. Co. 1 ..... abd
Zverck, Merrett et al 1 ..... abd
Neuendorf, Shell Pet. Corp. 2 ..... abd
Neuendorf, Shell Pet. Corp. 3 ..... abd
Fort Bend County—
Ransom, Grayburg Oil Co. 1 ..... abd
Harris County—
Genoa—Woodburn, Humble O. & R. Co. 1 ..... abd
Jasper County—
Orton, Burnham et al 1 ..... abd
Jefferson County—
Tolliver, Bleakie Oil Co. 1 ..... abd
Fannett—Junkers, Gulf Prod. Co. 1 400
Fannett—Burrell, Gulf Prod. Co. 3 1400
Fannett—Thomas, Gulf Prod. Co. 11 150
Fannett—Thomas, Gulf Prod. Co. 12 3600
Burrell, The Texas Company 1 ..... abd
Heisig, Shell Pet. Corp. 1 ..... abd
West, Westbury Oil Co. 1 ..... abd
Liberty County—
Sheeks—Cranfill & Reynolds 3-A 400
Sheeks—Esperson, Cranfill & Reynolds 3-A ..... abd
Moss Bluff—Liberty, Pure Oil Co. 1 .. abd
Orange County—
Port Neches—Stark, The Texas Company 1 1600
Washington County—
Calhoun, Lee Dekle 1 ..... abd
Tom, Fuchs et al 1 ..... abd
Clay Creek—Clay, Sun Oil Co. 1 ..... abd

Wells completed 26
Production 7850
Abandoned 19

SOUTH LOUISIANA

BAYOU BOUILLON—ST. MARTIN PARISH

State, Rycade Oil Corp. 3 ..... abd

EDGERLY—CALCASIEU PARISH

Hunter, Rex Pet. Corp. 10 15

HACKBERRY—CAMERON PARISH

Lemke, Calcasieu Oil Co. 3 600
Dorion, Calcasieu Oil Co. 7 ..... abd
Ellender, Sunshine Oil Co. 3 700
Carter & Sweeney, Yount Lee Oil Co. 1 1000
Lacey, Yount Lee Oil Co. 1 200
School Land, Yount Lee Oil Co. 9 ..... abd

Wells completed 6
Production 2500
Abandoned 2

LOCKPORT—CALCASIEU PARISH

Miller, Shell Pet. Corp. 1 ..... abd
Miller, Vacuum Oil Co. 15-A ..... gas
Wells completed 2
Abandoned 1
Gas 1

Gas production 600,000

SULPHUR—CALCASIEU PARISH

Fee, Union Sulphur Co. 750 1100
Fee, Union Sulphur Co. 751 3400
Fee, Union Sulphur Co. 752 1400

Wells completed 3
Production 5900

VINTON—CALCASIEU PARISH

Star—Vincent, Gulf Refining Co. 46 .. abd
Gree, Seiss Oil Synd. 8 30
Matilda Gray, Vinton Pet. Co. 1 1000
Matilda Gray, Vinton Pet. Co. 4 600

Wells completed 4
Production 1630
Abandoned 1

MISCELLANEOUS LOUISIANA

Iberia Parish—
Lake Feigneur, Jefferson Lake Oil Co. 2 abd
Iberville Parish—
White Castle—Wilbert, Shell Pet. Corp. 3 50
Bayou Blue—Wilbert, Standard Oil Co. 3 75
LaFourche Parish—
Thibodaux—Stark, Gulf Ref. Co. 19 .. abd
Thibodaux—Stark, Gulf Ref. Co. 20 .. abd
Thibodaux—Stark, Gulf Ref. Co. 21 .. abd
Thibodaux—Stark, Gulf Ref. Co. 22 .. abd
Thibodaux—Stark, Gulf Ref. Co. 24 .. abd
Plaquemine Parish—
Garden Island—State, The Texas Company 2 ..... abd
St. Martin Parish—
Hager—Martin, Ohio Oil Co. 3 ..... abd
St. Mary Parish—
Belle Isle, Freeport Sulphur Co. 4 ..... abd
St. Tammany Parish—
Fritchie, St. Tammany Oil Co. 2 ..... abd
Terrebonne Parish—
Evergreen, Charles Paggi 1 ..... abd
Lake Barre-State—Lake Barre, The Texas Company 2 1800
Bay St. Elain-State—Bay St. Elaine, The Texas Company 2 ..... gas

Wells completed 15
Production 1940
Abandoned 11
Gas 1

ARKANSAS

WELLS COMPLETED

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Ashley	0	0	0	1	1		2
Clark	0	0	0	6	0	1	1
Columbia	1	0	1	0	0	1	1
Faulkner	0	0	0	0	0	1	1
Garland	0	0	0	0	0	1	1
Grant	0	0	0	0	0	1	1
Johnson	1	0	1	0	0	1	1
Lincoln	1	0	1	0	0	0	0
Little River	1	0	1	0	0	2	2
Logan	0	0	0	0	0	1	1
Madison	0	0	0	0	0	1	1
Miller	0	0	0	0	0	1	1
Nevada	0	0	0	0	0	1	1
Ouachita	16	659	4	0	3	17	20
Pope	0	0	0	0	1	0	1
Prairie	0	0	0	0	0	1	1
Union	8	78	4	0	5	14	19
Van Buren	0	0	0	0	0	1	1
Washington	0	0	0	0	0	3	3
White	0	0	0	0	0	1	1
Total Oct.	28	737	12	0	10	50	60
Total Sept.	29	984	12	1	14	58	72
Difference	1	247	0	1	4	8	12

WELLS COMPLETED
COLUMBIA COUNTY

19-19-22 Pickler, Helena Oil & G. Co. 1 dry

JOHNSON COUNTY

21- 9-25 Wyver, Blackwell O. & G. Co. 1 dry

LINCOLN COUNTY

33-10- 6 Carter, Pine Prairie O. & G. Co. 1 ..... dry

LITTLE RIVER COUNTY

31-12-31 Allen, Grotte et al 1 ..... dry

OUACHITA COUNTY

35-15-15 Avers, Ark. Nat. Gas Co. 1 30
7-15-17 Buck, Falucher and others 1.. dry
35-15-16 Murphy, B. F. Foster 1. 15
25-15-18 Wilson, Houston Oil Co. 1-B.. dry
25-15-18 Allen, E. M. Jones 1-C (loc.).. abd
2-16-15 H. Murphy, E. M. Jones 2 .... dry
36-15-16 Linahan, Magna Prod. Co. 7-B 23
34-15-15 Clayton, Phillips Pet. Co. 2 .. 85
27-15-15 Fee, J. D. Reynolds 1 20
27-15-15 Fee, J. D. Reynolds 2..... 20
34-15-15 E. Johnson, Simms Oil Co. 3.. 60
35-15-15 Langley, Skelly Oil Co. 1 56
34-15-15 Woods, Skelly Oil Co. 3 35
34-15-15 Woods, Skelly Oil Co. 4..... 275
26-15-16 Arnold, Standard Oil Co. 12.... 40
26-14-18 Cranmer, Timberlake et al 1.. dry

Wells completed 16
Production 659
Dry 4

UNION COUNTY

2-16-16 Purifoy, E. L. Chapman 1 8
2-16-16 Purifoy, E. L. Chapman 2 (jkd) dry
10-17-14 Doss, Gann and others 1 .... dry
4-18-13 Cargile, Johnson-Gunmer Co. 1 dry
29-19-15 Mayfield, McDonald Bros. 1 .. dry
6-16-15 James, A. H. Ramage 10-A .. 25
9-17-14 Perdue, Rovenger Oil Corp. 3-B 25
36-17-16 Goodwin, Standard Oil Co. 6 .. 20

Wells completed 8
Production 78
Dry 4

NORTH LOUISIANA

Summary of Field Operations

	Comp.	Prod.	Dry	*Gas	Rigs	Drg.	Ttl.
Bossier	6	0	1	5	5	7	12
Caddo	18	967	3	1	6	28	34
Caldwell	0	0	0	0	1	0	1
Catahoula	0	0	0	0	0	1	1
Claiborne	0	0	0	0	1	3	4
DeSoto	2	0	2	0	0	5	5
Franklin	0	0	0	0	1	1	2
LaSalle	3	185	0	0	2	4	6
Morehouse	1	0	0	1	5	5	10
Natchitoches	0	0	0	0	0	3	3
Ouachita	5	0	0	5	15	15	30
Rapides	0	0	0	0	0	1	1
Red River	0	0	0	0	1	7	8
Richland	9	0	0	0	19	20	39
Sabine	3	225	0	0	2	7	9
Union	3	0	0	3	5	3	8
Webster	3	30	0	2	3	11	19
West Carroll	1	0	1	0	0	0	0
Winn	1	0	1	0	0	0	0
Total Oct.	55	1,407	8	16	71	121	192
Total Sept.	60	6,610	18	25	55	113	167
Difference	5	5,203	10	1	16	9	25

*Gas production: Bossier 53,855,000 feet; Caddo 1,000,000 feet; Morehouse 2,952,000 feet; Ouachita 17,346,000 feet; Richland 203,570,814 feet; Union 27,297,000 feet; Webster 60,223,000 feet; total 367,243,814 feet.

WELLS COMPLETED
BOSSIER PARISH

36-16-12 Van Hoose, Ark.-La. Pipe Line Co. 6-B ..... gas
14-17-12 Skannal, La. Gas & Fuel Co. 3 gas
21-19-11 Wetherbee, E. L. Morgan and others 1 ..... gas
32-16-11 Fee, Jones Chem. Co. 3 (SW) dry
24-17-12 Johnson, Palmer Corp. 1 .... gas
25-16-12 Hodges, Palmer Corp. 13-B... gas

Wells completed 6
Gas 5
Gas production 58,855,000

CADDO PARISH

31-21-15 Muslow, C. H. French 7 10
17-19-14 Hunter, Gulf Ref. Co. 2 12
17-19-14 Hunter, Gulf Ref. Co. 4 200
17-19-14 Hunter, Gulf Ref. Co. 5 13
34-21-16 Levee board, Gulf Ref. Co. 19-A 40
18-19-14 Oden, Gulf Ref. Co. 5 ..... dry
7-20-15 Levee Board, Magnolia Pet. Co. 4 25
15-19-14 Sibley, Old River Oil Corp. 1.. dry
8-19-14 Hunter, Palmer Corp. 1-A 25
9-19-14 Hunter, Ray-Dawes Drlg. Co. 3 100
9-19-14 Hunter, Ray-Dawes Dr. Co. 2-A 100
9-19-14 Ray-Dawes Drlg. Co. 3-A 150
13-20-15 Youree-Randolph, Simplex Oil Co. 7 ..... dry
16-19-14 School Board, Standard Oil Co. 3 200
23-22-15 Allen, Standish O. & R. Co. 12 5
9-19-14 Hunter, The Texas Company 2 17
11-15-12 Knight, Woodley Pet. Co 2-B gas
8-19-14 Hunter, The Texas Company 4 80

Wells completed 18
Production 967
Gas 1
Gas production 1,000,000
Dry 3

DE SOTO PARISH

1-12-13 Hamilton and others 1 ..... dry
13-13-14 Betty Rogers, R. O. Roy 1.... dry

LA SALLE PARISH

26-10-1e Mo. Pac. R.R., Air Lift O Co. 3 20
11- 9-1e Zenoria Lbr. Co., Montagu Oil Co. 7 150
16- 7-2e L. & A. R.R., Tunica Pet. Co. 50 15

MOREHOUSE PARISH

17-20-5 Bowles, J. S. Herkness 9 ..... gas
Gas production 2,952,000

OUACHITA PARISH

62-18-3 Chauvin, Auston & Jordan 1 .. gas
8-18-4 W. Virginia L. & T. Co., Chauvin Gas Co. 1 ..... gas
12-19-3 Stubbs, Imperial O & Gas Products Co. 10 ..... gas
13-18-4 Schultz, Mack & Pipes 2 ..... gas
11-19-5 Fee 404, Magnolia Petroleum Co. 3 ..... gas

Gas production 17,346,000

RICHLAND PARISH

17-16-6 Haynes & Vincent, W. C. Feazel 1 ..... gas
23-16-6 J. H. Hemler, Bendel & Brown 1 ..... gas
21-17-6 Boykin, Hope Prod. Co. 1 ..... gas
17-16-6 B. F. Sartor, Magnolia Pe.. 1 .. gas
21-17-6 Boykin, Pamer Corp. 1 ..... gas
22-17-6 Louisiana Pet. Co., Palmer Corp. 1 ..... gas
20-17-6 Marshfield, Palmer Corp. 4 ... gas
29-17-6 Mulhern, Palmer Corp. 1 ..... gas
21-17-6 Binion & Sartor, Carbon Co. 1.. gas

Wells completed 9
Gas 9
Gas production 203,570,814

SABINE PARISH

33-10-12 Horne, Ark. Fuel Oil Co. 2.. 125
33-10-12 E. E. Hall, Magnolia Pet. Co. 3 25
14- 7-14 Bowman-Hicks Lbr. Co., R. L. Gay, Tr. 4 75

UNION PARISH

2-20-3 Parks, Bahan & Bahan 1 .... gas
17-20-4 Peake, Bahan & Bahan 3 ..... gas
6-20-4 Jenny, Industrial Gas Co. 1 ... gas

Gas production 27,297,000

WEBSTER PARISH

1-22-11 Slack, Pat Hudson 1 30
28-21-10 Gray, Louisiana Oil Refining Corp. 9 ..... gas
28-21-10 Sally Coyle, Palmer Corp. 1 .. gas

Gas production 60,223,000

WEST CARROLL PARISH

24-23-11 Chickasaw Imp. Co., H. L. Hunt 1 ..... dry

WINN PARISH

27-10-1e Sanders, Thompson Brothers.. dry

EAST TEXAS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Bowie	1	0	1	0	0	0	0
Cass	0	0	0	0	0	1	1
Harrison	3	0	1	2	0	0	0
Panola	7	0	1	6	4	7	11
Red River	0	0	0	0	0	3	3
Shelby	1	0	1	0	0	3	3
Total Oct.	12	0	4	8	4	14	18
Total Sept.	6	0	0	6	6	17	23
Difference	6	0	4	2	2	3	5

WELLS COMPLETED
BOWIE COUNTY

L. T. King Survey—Lee Roseberry, Hooks Oil & Gas Co. 1 ..... dry

HARRISON COUNTY

J. J. Blair Survey—Abney, Nick Barbare 1 ..... gas
Joel Lipscomb Survey—Furrh, C. H. Lyons 2-A ..... gas
J. W. Crofts Survey—Dean, Mason and others 1 ..... dry

Gas production 2,500,000

PANOLA COUNTY

E. Jones Survey—Adams, T. C. Adams and others 3 ..... gas
Jesse Dunlap Survey—Davenport, Magnolia Pet. Co. 1 ..... gas
B. Stephenson Survey—Leigh Trosper, Magnolia Pet. Co. 1 (jkd) ..... dry
B C. Jordan Survey—C. G. Steele, Magnolia Pet. Co. 16 ..... gas
Jane Thorpe Survey—Mays, Natural Gas Producing Co. 2 ..... gas
W. D. Matthews Survey—G. C. Tiller, Nemours Corp. 5 ..... gas
Jane Thorpe Survey—Tiller, D. Thomason 1 ..... gas

Wells completed 7
Gas 6
Gas production 30,780,000

SHELBY COUNTY

G. H. Patterson Survey—Carraway, Gulf Ref. Co. 1 ..... dry

KENTUCKY-TENNESSEE

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Warren	2	1	1	0	0	2	2
Allen	0	0	0	0	0	6	6
Barren	0	0	0	0	0	1	1
Ohio	72	5,395	23	0	0	67	67
Daviess	22	1,450	3	2	1	28	29
Hancock	1	0	0	1	0	3	3
McLean	3	5	2	0	0	5	5
Henderson	3	130	0	0	0	8	8
Webster	1	0	0	1	0	2	2
Muhlenberg	1	0	1	0	2	8	10
Hopkins	0	0	0	0	0	8	8
Butler	0	0	0	0	1	1	2
Breckenridge	0	0	0	0	1	1	2
Christian	0	0	0	0	3	3	6
Cumberland	0	0	0	0	0	2	2
Logan	0	0	0	0	1	1	2
Todd	0	0	0	0	0	1	1
Wayne	2	0	2	0	0	5	5
Powell	0	0	0	0	0	1	1
Estill	0	0	0	0	0	3	3
Lee-Owsley	2	10	0	0	0	3	3
Johnson-Magoffin	3	13	0	0	0	1	1
Floyd	0	0	0	0	0	1	1
Clay	0	0	0	0	0	1	1
Jackson	1	0	0	1	0	1	1
Knox	0	0	0	0	0	1	1
Total Oct.	113	7,054	32	5	9	164	173
Total Sept.	146	8,791	48	5	10	176	186
Difference	33	1,737	16	0	1	12	13

WELLS COMPLETED
WARREN COUNTY

Bowling Green—H. S. Roark, Wood Oil 1 ..... dry
W. H. McGinnis, S. F. Durbin & Co. 7 1

Wells completed 2
Production 1
Dry 1

OHIO COUNTY

Hartford—J. E. Mitchell, Wood Oil 11.. 3
R. A. Duke, Wood Oil 14 110
C. C. Powers, Wood Oil 1 ..... dry
Ernest Duke, Wood Oil 1 ..... dry
J. C. Smith, Wood Oil 13 ..... dry
William Morgan, Rex-Pyramid Oil 7. 200
William Morgan, Rex-Pyramid Oil 8. 185
Viola Chapman, Rex-Pyramid Oil 1.. dry
E. L. Brooks, Rex-Pyramid Oil 1 .... dry
Joe Miller, Rex-Pyramid Oil 1..... dry
Sallie Hoover, Rex-Pyramid Oil 11... 140
Sallie Hoover, Rex-Pyramid Oil 12.. dry
Sallie Hoover, Rex-Pyramid Oil 13 .. 150
Rhodes, Rex-Pyramid Oil 2 ..... dry
Charles Trodgen, Rex-Pyramid Oil 2. dry
Charles Trodgen, Rex-Pyramid Oil 3. 240
W. A. Hewlett, C. E. Daugherty 4 ... 5
Albert Payne, J. C. Ellis & Co. 2 40
A. B. Ralph, J. C. Ellis & Co. 5 11
Ira Moseley, J. C. Ellis & Co. 10 25
W. W. Moseley, J. C. Ellis & Co. 1 ... 25
Ellis Bartlett No. 2, J. C. Ellis & Co. 3 dry
Otis Greer, J. C. Ellis & Co. 6 70
Allen Ralph, J. C. Ellis & Co. 6, 7 .... dry
Greer heirs, J. C. Ellis & Co. 1 15
George Burdette, J. C. Ellis & Co. 1.. 30
J. F. Magan, J. E. Sweatt & Co. 1 ... dry
Simon Wigg, Huff & Calderwood 1 ... dry
Widow Lashbrook, Three Cs Oil 1 .. dry
T. & L. Shively, Whitmer Oil & Gas 2, 3 ..... dry
Ernest Beckett, D. J. White & Co. 3.. 25
W. Midkiff, S. H. Russell & Co. 2 .. 54
W. B. Kelley, Ohio Oil 10 65
O. F. Pfister, Ohio Oil 1 50
Jim Kirk, Ohio Oil 1 200
Jim Kirk, Ohio Oil 2 400
Charles Roach, E. G. Purtle & Co. 3 dry
N. W. Rhodes, Petroleum Exploration 1 3

Tom Westerfield, Leeper Oil 3 ..... s
Mason-Bartlett, Hupp & Duff 8 500
Mason-Bartlett, Hupp & Duff 9 400
Mason-Bartlett, Hupp & Duff 10 ... 150
Mason-Bartlett, Hupp & Duff 11, 18. dry
Mason-Bartlett, Hupp & Duff 12 180
Mason-Bartlett, Hupp & Duff 14 300
Mason-Bartlett, Hupp & Duff 15 400
L. L. Trodgen, Hupp & Duff 21 150
Ellis Bartlett, Hupp & Duff 13 150
Reese Whittaker, Hupp & Duff 1.... 30
Norris heirs, Fred Weir & Co. 10 ... 30
Norris heirs, Fred Weir & Co. 11 35
Norris heirs, Fred Weir & Co. 12 50
Martha Medcalf, Chester Oil 7 80
Mary Brown heirs, S. H. Russell & Co. 9 60
Pate Royal, H. L. Ogle & Co. 16 75
Cicero Wade, Cumberland Pet. 4, 5 .. dry
Cicero Wade, Cumberland Pet. 6 150
Cicero Wade, Cumberland Pet. 8 200
Bob Hamilton, Cumberland Pet. 20 .. 50
Nancy Farmer, Sirman Co. 30 35
Nancy Farmer, Sirman Co. 31 60
Charles Trodgen, Rex-Pyramid Oil 1 200
Roach, Thompson & Tremor 1 15
A. P. Kelley, S. R. Nigh & Co. 12 15
E. J. Patton, Standard Oil of Ky. 2.. dry
Charles Roach, E. G. Purtle & Co. 4 .. 15
W. L. Howard, J. E. Hare & Co. 1 5
Will Griffith, Penn-Indiana Oil 6 ... 6
M. Chaman, Snowden-McSweeney 1 .. dry

Wells completed 72
Production 5395
Dry 23

Daviess County

Owensboro—Davis heirs, Evans & Garrison 2 200
Davis heirs, Evans & Garrison 1 ..... gas
Davis heirs, Evans & Garrison 3 300
Lindsay Purcell, Goldburg, Young & Co. 7 200
First Nat'l Bank, Penn-Indiana Oil 9 95
First Nat'l Bank, Penn-Indiana Oil 10 60
S. H. Easton, Cumberland Petroleum 7 60
S. H. Easton, Cumberland Petroleum 8 70
I. Salmon, Cumberland Petroleum 5.. 30
Louis May, Engle, Evans & Co. 1 .... dry
George Wagner, Creek Drilling 1 .... dry
B. Hamilton, Creek Drilling 3 60
John Sinclair, Jim Smith 1 ..... dry
George Beard, Johnson & Young 1 ... 100
J. H. Gray, Petroleum Exploration 1. 35
Ivy, Missouri-Kansas Pipe Line 3 ... gas
Hayden heirs, Cumberland Pet. 4 20
Oscar Wells, Smith, Randolph & Co. 11 75
M. C. Ruby, Eastern Gulf Oil 10 35
Zulu Johnson, Mecca Oil 1 15
H. C. Ruby, Eastern Gulf Oil 11 30
Frank Fuqua, Dahlgren & McMahan 3 65

Wells completed 22
Production 1450
Dry 3
Gas 2

HANCOCK COUNTY

Pellville—W. C. Smith, McMahan & Combs 1 ..... gas

M'LEAN COUNTY

Calhoun—E. L. Wells, W. Roy Hogan & Co. 1 5
C. L. Phelps, Creek Drilling 1 ..... dry
Jim Osborne, J. C. Ellis & Co. 1 .... dry

Wells completed 3
Production 5
Dry 2

HENDERSON COUNTY

Niagara—Herman Clark, Whitmer Oil 1 30
H. L. Crafton, Whitmer Oil 1 75
Ed Farley, Southern Oil Producing 1.. 75

Wells completed 3
Production 180

WEBSTER COUNTY

Sebree—Martin Rideout, E. W. Wilson 2 ..... gas

MUHLENBERG COUNTY

Greenville—J. E. Duke, Ellis & Young 1 dry

LEE-OWSLEY COUNTIES

District 17—Trabus, Superior Oil Corp. 1 5
Trabus, Superior Oil Corp. 2 5

Wells completed 2
Production 10

JOHNSON-MAGOFFIN COUNTIES

District 27—Williams heirs, Magoffin Oil Corp. 3 3
District 29—Milt Wheeler, Pittsburgh Trust 10 5
District 31—Erin Litteral, Hupp, Duff & Co. 2 5

Wells completed 3
Production 13

JACKSON COUNTY

Warfork—Warfork Land Co., Petroleum Exploration 1 ..... gas

WEST TENNESSEE

Rigs and Wells Drilling

	Rigs	Drg.	Ttl.
Decatur	0	2	2
Fayette	0	1	1
Total October	0	3	3
Total September	0	3	3
Difference	0	0	0

ALABAMA

Rigs and Wells Drilling

	Rigs	Drg.	Ttl.
Choctaw	0	1	1
Lamar	0	1	1
Sumpter	0	1	1
Marion	1	0	1
Washington	0	2	2
Total October	1	5	6
Total September	0	5	5
Difference	1	0	1

MISSISSIPPI

Rigs and Wells Drilling

	Rigs	Drg.	Ttl.
Alcorn	0	1	1
Chickasaw	0	1	1
Harrison	1	0	1
Hinds	1	3	4
Humphreys	0	1	1
Lafayette	1	0	0
Lauderdale	1	2	3
Lincoln	0	1	1
Monroe	0	3	3
Rankin	0	1	1
Warren	0	1	1
Yalobusha	1	1	3
Yazoo	1	0	1
Total October	6	15	21
Total September	3	14	17
Difference	3	1	4

ROCKY MOUNTAIN AREA

NEW MEXICO
Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Chaves	1	0	1	0	0	3	3
De Baca	1	0	1	0	0	2	2
Eddy	0	0	0	0	3	10	13
Lea	6	2,634	0	1	17	18	35
McKinley	0	0	0	0	3	9	12
Rio Arriba	0	0	0	0	1	4	5
San Juan	0	0	0	0	3	12	15
Misc.	0	0	0	0	3	8	11
Total, Oct.	8	2,634	2	1	30	66	96
Total, Sept.	22	3,110	12	0	21	71	92
Difference	14	476	10	1	9	5	4

UTAH
Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Dr.	Ttl.
Total, Oct.	0	0	0	0	2	30	32
Total, Sept	2	0	2	0	2	29	31
Difference	2	0	2	0	0	1	1

COLORADO
Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Boulder	0	0	0	0	0	4	4
Fremont	2	4	1	0	1	14	15
Jackson	0	0	0	0	0	7	7
Larimer	1	5	0	0	2	5	7
Las Animas	1	0	0	1	2	3	5
Moffat	0	0	0	0	6	4	10
Pueblo	0	0	0	0	1	3	4
Rio Blanco	0	0	0	0	0	2	2
Routt	2	0	2	0	2	1	3
Yuma	0	0	0	0	0	2	2
Misc.	0	0	0	0	0	33	33
Total, Oct.	6	9	3	1	14	78	92
Total, Sept.	11	0	9	2	16	76	92
Difference	5	9	6	1	2	2	0

WYOMING
Summary of Field Operations

Dist. of County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Salt Creek	3	1,747	0	0	3	7	10
Big Horn	0	0	0	0	0	7	7
Carbon	0	0	0	0	0	17	17
Fremont	0	0	0	0	0	10	10
Hot Springs	0	0	0	0	0	5	5
Lincoln	1	0	1	0	2	6	8
Natrona (Exclu. Salt C.)	0	0	0	0	1	8	9
Park	7	4,174	5	0	6	27	33
Platte	1	0	1	0	0	0	0
Sweetwater	1	0	0	1	2	11	13
Sublet	2	90	0	0	3	19	22
Weston	2	115	0	0	1	3	4
Uinta	2	15	1	0	3	13	16
Misc.	0	0	0	0	3	9	12
Total, Oct.	18	6,141	8	1	24	142	166
Total, Sept.	24	3,821	9	4	26	156	182
Difference	6	2,320	1	3	2	14	16

MONTANA
Summary of Field Operations

District—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Cat Creek	1	25	0	0	0	1	1
Kevin-Sunburst	28	442	13	6	17	20	37
Pondera	3	40	1	0	2	2	4
Miscellaneous	7	8	5	1	4	72	76
Total Oct.	39	515	19	7	23	95	118
Total Sept.	51	1,268	11	10	16	113	129
Difference	12	753	8	3	7	18	11

MONTANA
WELLS COMPLETED

21-15-30 Carroll Bros. 1 25
27-35- 2 Smoke, California Co. 14 4
27-35- 2 Smoke, California Co. 15 .... dry
24-35- 2 Wait, Clara Oil Co. 7 13
29-35- 2 Jarrett, A. E. Crumley 4 220
10-35- 2 Bruins, Tom Davis Synd. 11.. gas
28-35- 1 Levnick, Doloraine Oil Synd. 8 10
4-34- 2 Corey, Huso et al 1 ..... dry
29-35- 1 Anderson, Ferdig Oil Co. 32.. 8
29-35- 2 Jarrett, "56" Petro. Corp. 6.. gas
29-35- 2 Jarrett, "56" Petro. Corp. 7.. dry
36-24- 1 State, Hannah Porter 4 50
20-35- 1 Zachor, J. N. B. Oil Co. 2 .... dry
10-32- 2 Larsen, Jones Oil Co. 1 ..... dry
28-35- 1 Dipple, Monopeg O. & G. 2 .. dry
5-34- 1 Maloney, Munger et al 2 .... dry
12-34- 2 Adams, J. M. Murphy 1 ..... dry
24-33- 2 Frogge, Northern Nat. Gas 2. gas
25-35- 2 Stewart, Oh Boy Oil Co. 1 ... 75
10-35- 2 Bruins, Ohio Oil Co. 10 45
9-35- 2 Howling, Texas Pacific C. & O. 10 ..... dry
15-34- 1 Burwash, Magic Oil Co. 4 .... gas
1-35- 2 McDonald, Lilly Graham 1 25
23-33- 3 Schestak, Aloe Big 5 O. & G. 1 gas
13-34- 2 Morton, Campbell et al 6 .... dry
17-34- 1 Paterson, Dakota Montana 4 .. dry
1-33- 2 Stromme, New Day Oil Co. 1. gas
24-34- 2 Morton, Marine Oil Co. 3 ..... dry
7-34- 1 Harte, Radigan-Hungerford 11 dry
8-27- 4 Jones, Fulton Petro. Co. 2 ... dry
8-27- 4 Jones, Fulton Petro. Co. 3 ... 25
11-27- 4 Miller, Kevin Conrad 1 15
32-26- 1 Freeborn, Harris Hammond... dry
5-25- 1 Speer, "56" Petro 7 8
24-26- 1 McHall, Harris Hammond ... dry
6- 5-61 SW, E. D. Miller 1 ..... gas
6-14-31 SW, Carroll Bros. 1 ..... dry
36- 7- 2 Swamboda-Davis 1 ..... dry
21-26- 4 Malone, Texas Prod. Co. 1 ... dry

Completions 39
Production 515
Dry 19
Gas 7

NEW MEXICO
WELLS COMPLETED

1-14-28 Robbins, Transcontinental Oil 1 dry
1-3s-21 Dunlap, Transcontinental 1.... abd
6-22-36 Closson, Empire G. & F. 1.... gas
15-19-33 Leach, Midwest Ref. Co. 24 ..1250
10-19-33 Terry, Walker Oil Corp. 1 ... 465
14-25-36 Lindley, Humble O. & R. 1-B . 680
11-25-36 Wells, Continental Oil 1 139
31-25-37 Gregory, Midwest Ref. Co. 22 .. 100

Wells completed 8
Production 2634
Gas 1
Gas 110,000,000
Dry and abandoned 2

COLORADO
WELLS COMPLETED

21-20-69 McCandless, Donnelly Bros. 1.. 4
34-18-70 Boyd, O. W. McLeod 2 ..... dry
6- 9-68 Fleming, Continental Oil 1 ... 6
35-29-60 Morris-Cowdery, Helium Co. 2 gas
7-6n-86 State-Lubers, Texas Prod. Co. 2 dry
17-6n-86 State, Hynds Oil Co. 1 ..... dry

Wells completed 6
Production 9
Gas 1
Dry and abandoned 3

WYOMING
WELLS COMPLETED

35-40- 79 SW Midwest Oil 6-SD-2 1730
34-40- 79 NE Midwest Oil 13-SD-3 19
11-19-116 Quad-States Oil Co. 1 ..... dry
25-58- 98 Rosenberg, Midwest Ref. 36 ..2424
6-51-100 Cactus, Enalpac O. & G. 2 ..1750
31-58- 99 Henderson Prod. Co. 1..... abd
31-58- 99 Henderson Prod. Co. 2..... abd
17-51-101 Libby, Texas-Mont. Prod. 1 .. abd
36-51-101 Hoodoo, Big Horn Pet. Co. 1 dry
4-51-102 Nelson, Cody Pet. Co. 1 .... dry
20-29- 68 Glendo, Nebraska Oil Co. 1 .. dry
13-12-100 Newberry, Mtn. F. S. Co. 1 .. gas
34-27-113 California Pet. Co. 4-L 40
34-27-113 California Pet. Co. 7-L 50
24-46- 64 Oregon-Wyo. O. & G. Co. 2 .. 90
11-46- 65 Hugh Updyke 3 25
6-14-118 E. L. Doheny et al 1..... 15
19-18-117 P. L. Cooper et al 1 ..... dry

Wells completed 18
Production 6143
Gas 1
Gas production 30,000,000
Dry and abandoned 8

EASTERN FIELDS

Summary of Completed Work

Fields—	Comp.	Prod.	Dry	Gas
Allegany	45	90	0	0
Bradford	300	477	0	0
Middle Field	5	9	0	0
Venango-Clarion	49	71	0	4
Butler-Armstrong	21	30	4	2
S W. Pennsylvania	21	60	5	7
West Virginia	97	425	12	42
S. E. Ohio	94	1,081	21	14
Total Oct.	632	2,243	42	69
Total Sept.	603	3,200	49	55
Difference	29	957	7	14

Summary of Work Under Way

Fields—	Rigs	Drlg.	Ttl.
Allegany	10	24	34
Bradford	46	141	187
Middle Field	0	1	1
Venango-Clarion	4	24	28
Butler-Armstrong	6	19	25
S. W. Pennsylvania	2	41	43
West Virginia	46	131	177
S. E. Ohio	36	119	155
Total October	150	500	650
Total September	123	485	608
Difference	27	15	42

NEW YORK AND N. W. PENNSYLVANIA
WELLS COMPLETED
ALLEGANY FIELD

Forest Oil Corp. (10 oil wells) 10
Wheaton, Dusenbury et al 1
Hastings, Currie & Burns ..... water
Fee, Barnes et al 1
Hall & Brown, Allegany Gas 1
F. J. McDermitt, J. K. Cochrane et al.. 2
Fee, J. M. McDivett et al 6
South Penn Oil Co. et al, Reeland et al 10
Fee, C. M. & W. L. Dunning 3
Fee, C. M. & W. L. Dunning 3
Fee, G. N. Hill 3
Coast & South Penn Oil Co., W. F. Lane & Co. 5
First Day Baptist Assn., C. Birtcil et al. 1
Fee, Producers Gas 4
Fee, McDonnell heirs 3
Coast et al, M. J. Crowley et al 4
Coast et al, M. J. Crowley et al 5
Fee, Penn Petroleum 3
Fee, Penn Petroleum 3
Fee, Le Suer Oil Corp. 2
Fee, A. J. Mason No. 3 1
Fee, N. V. V. Franchot 2
Fee, Means & Perkins 1
Fee, Garr Oil 1
Miller & Bovaird, J. W. Bucher estate.. 2
Carls, M. C. Oil 1
Fee, Ryder & Richmond Oil (7 wells).. 7
Seaward, Manlyn Oil 1
Richmond, Manlyn Oil 2
Baker, Morris Shear estate 1
Fee, McCaffery & First Bank, Olean... 1

Wells completed 45
Production 90
Water 1

BRADFORD FIELD

Forest Oil Corp., 5 oil wells 5
Forest Pet. Corp., 13 oil wells 13
Hawkins Oil Corp., 9 oil wells 9
Niagara Oil Corp., 11 oil wells 11
Mantz, L. F. Kinley et al 55 1
371 Bing., Lane No. 1 et al 60 1
366 Bing., Simpson et al 87 1
386 Bing., Simpson et al 88 2
291 Bing., Howard & McCallum 98 1
389 Bing., D. W. Daly No. 1, 67 2
389 Bing., D. W. Daly No. 1, 68 4
412 Bing., Daly Oil 11 2
369 Bing., D. W. Daly No. 2, 77 2
464 Bing., R. S. Pringle 33 1
368 Bing., Wilson & Fitzgibbon No. 2, 24 1
464 Bing., R. S. Pringle 34 1
Bing., 190-196, S. P. O. 86 1
Melvin, South Penn Oil 261 1
Melvin, South Penn Oil 259 1
Melvin, South Penn Oil 260 1
Midland-Taylor, S.P.O. 55 1
B. I. Taylor, South Penn Oil 48 1
Cross, South Penn Oil 13 1
Hamlin, South Penn Oil 128 1
M. E. Jones, South Penn Oil 269 1
Lee, Hallock & Weston, South Penn Oil 111 1
Lee, Hallock & Weston, South Penn Oil 112 1
Midland, Keating, S. P. O. 52 1
Degolia, South Penn Oil 10 1
Dent, South Penn Oil 128 1
Melvin, South Penn Oil 262 1
Blair, South Penn Oil 64 1
Cross, South Penn Oil 6 1
Broden, South Penn Oil 20 1
M. E. Jones, South Penn Oil 270 1
Cross, South Penn Oil 14 1
Curtis & Imus, South Penn Oil 50 1
Whipple, South Penn Oil 149 1
Melvin, South Penn Oil 261 1
Cross, South Penn Oil 9 1
Kinzua wells, South Penn Oil 193 1
Kinzua wells, South Penn Oil 195 1
Bing., Satterfield, S. P. O. 161 1
H. E. Smith, South Penn Oil 199 1
Bing.-Johnson, S. P. O. 58 1
Bing. 439, South Penn Oil 124 1
Bing., 439, South Penn Oil 125 1
Bing. 400 acres, S. P. O. 92 1
Moody lots 66, South Penn Oil 44 1
Bing. 450-474, S. P. O. 102 1
Rew & Hodge, S. P. O. 62 1
Bing. 533, South Penn Oil 114 1
Bing. 400 acres, S. P. O. 95 1
Bing., Satterfield, S. P. O. 162 1
Bing. 387, South Penn Oil 16 1
Culbertson lots, S. P. O. 35 1
H E. Smith, South Penn Oil 201 1
Tract 1, Hazelwood Oil 78 1
Plan 9, Tract 3, Alleg. Hazelwood Oil 78 1
Plan 9, Tract 3, Alleg. Hazelwood Oil 68 1
Tract 25, Hazelwood Oil 29 1
Tract 1, Hazelwood Oil 99 1
Tract 1, Hazelwood Oil 78 1
Tract 28, Hazelwood Oil 81 1
Tract 27, Hazelwood Oil 151 1
Fee, Healy Pet. Cor. ....
Quintuple, Healy Pet. Corp. ....
Tibbits, Minard Run Oil ....
Quintuple, W. C. Kennedy Co. ....
Bingham, Walker Bros. 5
Minard, Minard Run Oil 2
Bingham, H. B. Oil 10
Bingham, Gibson Oil 1
Fee, Devore Oil 7
Fee, Margaret Coit 5
Fee, Healy Pet. Corp. 5
Drake, E. A. Williams 1
Fee, Stuchel Hardy & Co. 1
Fee, E. B. Sage estate 3
Fee, E. B. Sage estate 4
Fee, C. A. McFadden 3
Bingham, Minard Run Oil 1
Quintuple, W. C. Kennedy Co. ....
Dent, Minard Run Oil 10
Strong, Denwood Oil ....
Fee, Blaisdell Co. ....
Fee, Simpson Cooper Corp. ....
Bingham, Park & Park ....
Bingham, Brink & Brink ....
Fee, Fred J. Lawson ....
Fee, Monroe & Field ....
Fee, H. M. Wick, agent ....
Wallace Weston, Jr., S. P. O. 4
Wallace Weston, Jr., S. P. O. 8
Fee, South Penn Oil 4
H. H. Redfield, S. P. O. 1
Fee, W. E. Williams et al 2
Fee, Bradford Producing 1
Fee, A. J. Van Tine 5
Fee, Juette Bros. ..... sand
Fee, R. O. Landers et al 2
Fee, A. Stover 2
Fee, Dallas Oil ..... sand
N. V. V. Franchot, F. A. Wile et al ... 3
Fee, Hazelwood Oil 1
Franchot, Lilly Oliver 3
Kinley Oil Co., Pure Penn Oil 5
Fee, Healy Pet. Corp. 1
Fee, Healy Pet. Corp. 1
Fee, Healy Pet. Corp. 1
Fee, Healy Pet. Corp. 1
Fee, A. W. Palmer 2
Hostetter estate, W. N. Hunter 4
Fee, South Penn Oil 5
Wilkeson, Berwald Williams 2
Fee, South Penn Oil 1
Quintuple, Lou Potter Mulhaupt 1
Quintuple, Lou Potter Mulhaupt 1
Kemp, J. B. Jamison 1
Fee, Bradford Prod., Inc. ..... oil
Fee, G. D. Dana & Co. 1
H. E. Smith, S. P. O. 5
Fee, M. Hungiville 30
Fee, J. Bliss et al 20
Fee, T. H. Givens 10
Bingham 150, South Penn Oil 2
Bingham 453, South Penn Oil 1
Fee, South Penn Oil 2
Bingham 475, South Penn Oil 1
Fee, Mrs. S. F. Kabar et al 1

Bingham 150, South Penn Oil 2
Fee, South Penn Oil 3
Bingham 212, Associated Prod. 9
Bingham 570, South Penn Oil 2
Bingham 439, South Penn Oil 2
Bingham 494, South Penn Oil 2
Bingham 539, South Penn Oil 1
Fee, Olean Pet. Corp. 2
Fee, South Penn Oil 10
Fee, South Penn Oil 12
Kennedy & Clark, Phoenix Oil 3
Fee, W. C. Kennedy Co. 2
Fee, W. C. Kennedy Co. 3
Bingham 153, Hazelwood Oil 3
Bingham 196, South Penn Oil 2
Ryan & Perry, Luke Bros. 2
Bingham 188, Harris Oil 3
Bingham 390, South Penn Oil 2
Bingham 395, South Penn Oil 2
Bingham 398, South Penn Oil 1
Bingham 501, South Penn Oil 1
Bingham 394, Saph & Wright 4
Whipple, South Penn Oil 1
Fee, South Penn Oil 4
Hazelwood Tract 1, Hazelwood Oil 2
Willettes (Slingerland), L. L. and G. W. Slingerland hrs. 1
Corwin, T. H. Kennedy 1
Moore, H. J. Walters 2
F. P. Lawton, Suhr McSweeney & Co. .. 2
Tract 25, Hazelwood Oil 1
Rew & Hodge, South Penn Oil 1
M. E. Jones, South Penn Oil 30
Mitchell, Bradford Prod., Inc. 2
Duke, C. A. Duke 3
Duke, V. Schopperle 1
Duke, V. Schopperle 1
Duke, V. Schopperle 1
Duke, V. Schopperle 1
Duke, Penn Pet. 10
Jack, H. F. and C. Jack 4
Fee, D. J. Moody 5
Russell fee, C. E. Potter 5
Chambers fee, Forest Oil 2
Fee, J. B. Randall 2
Fee, Mix Creek Oil 1
Bell, J. S. Brown 1
Fee, Curtis & Dunlavey 1
Fee, Gordon H. Smith 2
Rounds, N. V. V. Franchot 5
Rasey, J. W. Kaufman est. 2

Wells completed 300
Oil wells 200
Production 477
Pressure wells 100

MIDDLE FIELD

Wardwell, South Penn Oil 1
Wardwell, South Penn Oil 1
Rogers, F. H. Trax 1
Johnson, Clinger Bros. & Taggart 5
Johnson, Johnson & Myers Bros. 1

Wells completed 5
Production 9

VENANGO-CLARION

Critchlow, James McElhaney 8 1
Edinger, Hovis Porter et al 8 1
Bissell, South Penn Oil 173 2
Ziegler, M. W., P. G., and L. F. Ziegler 5 2
Hasson, Ed. Siederman 56 1
Gordon, Franklin Trust 27 1
Milton, S. G. Milton 82 1
Milton, S. G. Milton 83 1
Surrena, Surrena & Hamilton 28 2
Rumsey & Co., Rumsey & Lamberton 77 1
Ghost, Bowers & Hovis 17 1
Stritz, H. H. Lebrum 7 1
Stone, S. P. McCalmont est. 6 1
Stone, S. P. McCalmont est. 7 1
Reagle, John S. Reagle 15 1
Tract 74, S. Y. Ramage 93 1
Clark, Robt. and Geo. Foggan 35 4
Clark, Robt. and Geo. Foggan 36 10
Mathews, Plum O. & G. et al 5 1
Van Camp, J. B. Stiner Oil 2 1
Dana, Lepley, Wood et al 2 1
Miller, M. L. Weaver 1 1
Friggle, Friggle Bros. 62 1
Paul & Simmon, E. C. Breene et al 46 1
Gill tract, W. J. Corse 28 1
Jones, J. F. Lester 28 1
McElphatrick, McElphatrick & Witherup 28 1
Fowler, E. A. Burch et al 18 2
Fowler, E. A. Burch et al 19 2
Helseel, C. F. & C. Oil & Gas 1 1
Helseel, C. F. & C. Oil & Gas 2 1
Helseel, C. F. & C. Oil & Gas 3 1
Helseel, C. F. & C. Oil & Gas 4 1
Helseel, C. F. & C. Oil & Gas 5 1
Schwab, J. E. Keverline est. 14 2
McLaughlin, Thos. McLaughlin 20 2
Bush, Fryburg Motor 5 2
Crawford & Gregory, Crawford & Gregory 346 1
Clarion—
Sigworth, Lickingville Gas 1 ..... gas
Sigworth, Howe Gas 1 ..... gas
Edinger, Roy Edinger 6 3
Collner, L. C. Collner 3 1
Hagerty, H. W. Hagerty 8 1
Black, F. G. Youkers 11 1
Meherton, F. C. Deem 14 6
Meherton, F. C. Deem 15 1
Leeper & Co., L. B. Shannon 5 1
McDonald, L. B. Shannon 2 1
Kaufman, Dempseytown Gas 1 ..... gas

Wells completed 49
Production 71
Gas 4

BUTLER-ARMSTRONG

Anderson, Crawford & Gregory 22 1
Blair & Stewart, Blair & Stewart 10 .. 3
Hays, Shelby Oil 6 3
Geophart, Frederick & Co. 1 1
McIntosh, E. C. Dunlap 1 3
Earhart, Sherwin, McGill et al 3 2
Frederick, Frazier & Co. 2 1
Wiles, Pointius Wiles & Co. 1 4
Heron hrs., James Heron et al 4 3
McCandless, Edward McCandless et al 1 dry
McMillan, T. W. Phillips G. & O. 1 ... gas
Campbell, Mark W. Graham 21 2
Campbell, Hamilton, Rigney et al 8 ... 1
McKinney, Ed. McKinney 9 1
Snyder, W. M. Ruby 18 ..... dry
Barkley, M. B. Finnesy 28 2
Welland, Welland Oil 1 ..... gas
Barkley, H. R. Edeburn 1 ..... dry
Wilson, O. E. Behm 1 1
Cookson, J. A. Elliott et al 4 ..... dry
Byers, Guy Sutton 16 2

Wells completed 21
Production 30
Dry 4
Gas 2

SOUTHWEST PENNSYLVANIA
WELLS COMPLETED
WASHINGTON COUNTY

Montgomery, Lewis & Co. 2..... 10
Lutton, Tague Bros. 6..... 15
Morgan, Rowe O. & G. Co. 1..... 10
Stevenson, John Duncan 2..... 2

ALLEGHENY COUNTY

Knoderer, Purdy Bros. 1..... dry
Bradie, Bradie & Co. 1..... gas

GREENE COUNTY

Lynch, Equitable Gas Co. 1..... gas
Stewart, Greensboro Gas Co. 2..... gas
South, Garard & Co. 7..... 1
Barb, Garard & Co. 2..... 1
Ptles, Peoples Gas Co. 1..... 10
Fox, Peoples Gas Co. 2..... gas
Lantz, Peoples Gas Co. 2..... dry
Williams, Equitable Gas Co. 1..... dry
Vance, Greensboro Gas Co. 1..... dry
Camberiedge, I. L. VanVorrhis 1..... gas
Camp, Milliken & Co. 1..... dry
Iams, Carnegie Gas Co. 2..... gas

BEAVER COUNTY

Mason, F. J. Miller 2..... 1

BUTLER COUNTY

Cole, Keck & Co. 3..... gas
Harvey, Phillips O. & G. Co. 5..... 10

Wells completed 21
Production 60
Dry 5
Gas 7

WEST VIRGINIA
WELLS COMPLETED
LEWIS COUNTY

Harold, Mid Penn Oil Co. 2..... dry

HARRISON COUNTY

Flannigan, Johnson & Moses 1..... 1
Carter hrs., Wilson O. & G. Co. 1..... 5

MARION COUNTY

Robinson, Owens B. & M. Co. 2..... gas

MONONGALIA COUNTY

Broadwater, Mfrs. L. & H. Co. 2..... dry
Moore, Phila. Oil Co. 1..... 4

WETZEL AND TYLER COUNTIES

Farrell, Phila. Oil Co. 3..... 10
Edgell, Carnegie Gas Co. 11..... 50
Bartrug, Carnegie Gas Co. 3..... 10
Lancaster, Oakland O. & G. Co. 1..... 1
Carpenter hrs., H. M. C. O. & G. Co. 1.. dry

MARSHALL COUNTY

Phillips, Valley Run O. & G. Co. 1..... 3
Clark, Marshall-Preston Oil Co. 1..... gas

HANCOCK COUNTY

Cline, Joy & West 1..... 1

DODDRIDGE COUNTY

Maxwell, Columbian Carbon Co. 54..... gas
E. Maxwell, Phila. Oil Co. 1..... dry
Pigott & Co., Yoke C. & R. Co. 3..... 15
Zinn, Broadwater & Wilson 1..... dry

RITCHIE COUNTY

Lievering, E. E. Pope 1..... 1
Gainer, Hope Gas Co. 1..... gas
Haught, So. P. O. Co. 3..... 40
Woodford, John Hammer 1..... gas
Rowland hrs., J. W. Roland 2..... 2
Hall hrs., B. C. Ullman 2..... gas
Conley hrs., H. N. Rinehart 2..... 2
Nutter, A. McCullough 1..... gas
Bricerstaff, So. O. P. Co. 3..... 18
Wilson, So. P. O. Co. 20..... 60
Jordan & Co., Hope C. & R. Co. 6..... 5
Kerby, O'Day Est. & Co. 1..... 3
Carlile, Majestic O. & G. Co. 6..... 1

GILMER COUNTY

Keister, C. M. Bennett & Co. 3..... gas
Miller hrs., Phila. Oil Co. 1..... gas
Wolf, Pittsburgh & W. Va. Gas Co. 2.. gas
Snider, Pittsburgh & W. Va. Gas Co. 2.. gas
Wil., Hope C. & R. Co. 2..... 10
Wilt, Hope C. & R. Co. 3..... 5
Kelly & Co., J. A. Kelly & Co. 2..... 10
Cunningham, McCall Drlg. Co. 1..... dry
Collins hrs., Gainer Farm O. & G. Co. 1 gas
Fling, Ellis O. & G. Co. 2..... dry
Hardman, Hope C. & R. Co. 1
Stump, Chartiers Oil Co. 3..... gas

CLAY COUNTY

Reed, V. G. O. & G. Co. 3..... 20
Summers, V. G. O. & G. Co. 7..... 5
B. S. G. & S., V. G. O. & G. Co. 23..... 15
Brown-Goshorn, U. F. G. Co. 3,882..... gas

WIRT COUNTY

Rex, L. F. Andrews 11..... 1
Hickman, F. Moorhead 7..... 2
Lewis & Co., S. Lebon & Co. 3..... 3

WOOD COUNTY

Sugden, Valley Mills Oil Co. 2..... gas
Ohlinger, Hovis & Green 1..... 1
O'Brien, Bennett Oil Co. 1..... 1

PLEASANTS COUNTY

Curties, Powell & Co. 1..... dry
Varner, Adam Ward 18..... 5
Hart, Dinsmoore & Co. 1..... 1

ROANE COUNTY

Enoch hrs., Heck Oil Co. 2..... 50
Courtney hrs., Evans & Co. 1..... 10
R. P. & N., Federal O. & G. Co. 47..... dry
Stockly, So. P. O. Co. 101..... 25
Hunt, V. G. & O. Co. 3..... 20
McLaughlin, U. F. G. Co. 1..... gas

CALHOUN COUNTY

Barr, Hope C. & R. Co. 3..... dry
Yoak, So. P. O. Co. 1..... 5
Elliott & Co., V. G. & O. Co. 1..... 5
Ferrell, Rockwell & Co. 1..... gas
Hathaway, V. G. & O. Co. 1..... 5
Marshall, L. P. Bickel 1..... gas
H. Ferrell, W. H. Bickell 1..... gas
Johnson, W. H. Bickel 1..... gas
Arthur, W. H. Bickel 1..... gas
Harris, L. P. Bickel 1..... gas
Poling, G. L. Cabot 1..... 5
Jackson, Snodgrass Bros. 1..... gas
Blackshire, Hamilton & Co. 1..... gas
Maze, Maze O. & G. Co. 2..... 2

JACKSON COUNTY

Mitchell, V. G. & O. Co. 1..... dry
McCarty, So. P. O. Co. 9..... 5

KANAWHA COUNTY

Shaffer, Chartiers Oil Co. 1..... dry
Wiseman, C. D. G. Co. 102..... gas
Littlepage, U. F. G. Co. 2,582..... gas
Queen Land Co., U. F. G. Co. 3,679..... gas
Blue Creek & L. Co., U. F. G. Co. 3,958 gas
Sunday Creek Co., U. F. G. Co. 3,979.... gas

LINCOLN COUNTY

Miller, U. F. G. Co. 3,909..... gas
Egnar, U. F. G. Co. 3,897..... gas
H. C. L. & M. Co., U. F. G. Co. 3,898.. gas
Wiley-Thompson, U. F. G. Co. 3,947.... gas

MINGO COUNTY

Vance, F. H. Evans 2..... gas
Kirk, E. J. Evans 1..... gas

BOONE COUNTY

Nelson Improvement Co., G. L. Cabot 6 gas
Cole R. M. Co., U. F. G. Co. 3,918..... gas
Cassingham & Co., Owens B. & M. 18.. gas
Marrinna, Gillespie Gas Co. 1..... gas
Pond Fork Co., Yawkey O. & G. Co. 12. gas
Cole-Crane R. Co., Pond Fork O. & G. 8 gas

LOGAN COUNTY

Boone Co. Corp., Glendenin Gas Co. 3.. gas

Wells completed 97
Production 425
Dry 12
Gas 42

SOUTHEAST OHIO
WELLS COMPLETED
MONROE COUNTY

Bode, Timblin Est. & Co. 17..... dry
Winland, Sylvania Prod. Co. 6..... 25
Kinsey hrs., Sylvania Prod. Co. 11..... 2
Kinsey hrs., Henry Hersher 8..... 15
Mallet, Preston Oil Co. 1..... 5
Burkhart, A. Goldstein 3..... 2
Shumaker hrs., Showthaout 1..... dry
Hines, Shay, McMcMuffin & Co. 2..... 5
Hagan, W. C. McBride, Inc. 1..... 1

PERRY COUNTY

Glass, Trinway O. & G. Co. 2..... gas
Clark, Elder & Co. 4..... gas
Layszler, Ohio F. G. Co. 2..... gas
May, Bloomville Oil Co. 1..... gas
Comba, Bell, School & Co. 1..... gas

HOCKING COUNTY

Anthony, Gordon Oil Co. 7..... 3
Thomas, Griffin Prod. Co. 7..... 6
Woodruff hrs., Sturm & Co. 6..... 3
Sunday Creek Co., Preston Oil Co. 354.. dry
Miller, Preston Oil Co. 5..... 7

GUERNSEY COUNTY

Stewart, Ohio F. G. Co. 1..... 10
Oldham, Ohio F. G. Co. 1..... 10
Stucker, Ohio F. G. Co. 1..... 20
Gray, East Ohio P. & R. Co. 1..... 70
Quillin, East Ohio P. & R. Co. 1..... 50
Quillin, East Ohio P. & R. Co. 2..... 75
Black, Gordon Oil Co. 1..... dry
Calloway, C. F. O. & G. S. Co. 2..... 60
Smetts, Aull & Co. 1..... 35

HOLMES COUNTY

Garver, Logan Gas Co. 1..... gas
Smith, East Ohio Gas Co. 1..... 50
Shrock, Ohio Fuel Gas Co. 1..... gas
Rhode, Ohio Oil Co. 1..... 35

LICKING COUNTY

Emmet, W. J. McClay & Co. 2..... 15
Rector, Hope C. & R. Co. 3..... 3
Scanlon, Preston Oil Co. 1..... 3
Helphrey, Hope C. & R. Co. 9..... 25
McKee, Pure Oil Co. 2..... 200
O. McKee, Pure Oil Co. 2..... 135
Martin, Emerald Pet. Co. 6..... 10
O'Bannon & Co., Hope C. & R. Co. 4.... 50
Flenner, E. H. Everett Co. 3..... 40
Cotterman, Fa.ton & Co. 9..... 4
Williams, North Fork Oil Co. 9..... 4
Wright, Hope C. & R. Co. 3..... gas

COSHOCTON COUNTY

Norris, Pure Oil Co. 4..... 5

ATHENS COUNTY

Harris, W. S. Harris 10..... dry
Curtis, Smith & Co. 7..... dry
Bean, C. F. Fox 5..... dry
Dean, J. H. Kiggins 4..... gas
Marcum & Co., Three-Way Oil Co. 1.... 2
Brooks, Sepery & Co. 3..... 3
Clark, Powers O. & G. Co. 2..... 2
Enlow, Ohio Fuel Gas Co. 1..... 2
Hoover, Ohio Fuel Gas Co. 1..... gas
Baker, Gross & Frebault 1..... 1

NOBLE COUNTY

Crock, Henning & Co. 9..... gas

KNOX COUNTY

Little, Emerald Pet. Co. 3..... dry
Hall, Cameron Co. 1..... 4
Dugan, Ark. Fuel Oil Co. 13..... 2
Hine & Co., Preston Oil Co. 1..... 21

MEIGS COUNTY

Sansbury, Cochran & Co. 2..... dry
Salser, Preston Oil Co. 3..... 3
Davis, Preston Oil Co. 2..... dry
Camden, Tyree & Co. 7..... 3
Cooper hrs., R. C. Tyree 1..... 3
Karr, S. O. P. Co. 2..... dry
Carnahan, S. O. P. Co. 1..... dry
Beegle, Thompson & Co. 1..... dry
Spencer, Hazlett & Co. 2..... 5
Carnahan, Goddard & Co. 8..... 3

WASHINGTON COUNTY

Bosworth, Onedia Pet. Co. 26..... 2
Mendenhall, Parsons & Sweeny Oil 5.... 1
Pool, John & Co. 1..... 1
Nau, Henderson Oil Co. 2..... 1
Schneider, Blossom Oil Co. 1..... 3
Payne, Newhart & Co. 3..... 3
Thornily, J. Thornily 4..... dry
Ingram, Crescent Prod. Co. 5..... dry
Mendenhall, Reader Est. 1..... gas
Hadley, Smith & Co. 17..... dry
Ward, Schramm & Co. 120..... gas
Dye, Koon, Cline & Co. 1..... 2

JEFFERSON COUNTY

Featner, Featner & Co. 5..... 5
Daugherty, Becker Oil Co. 1..... dry

HARRISON COUNTY

Mercer, Harrisville O. & G. Co. 1..... dry

ASHLAND COUNTY

Derrenberger, Great Lake Oil Co. 3.... 1
Heffelfinger, Great Lake Oil Co. 4..... 5
Young, Great Lake Oil Co. 3..... dry
Aber-Alexander, Meltzern & Co. 3..... dry
Aber-Alexander, Meltzern & Co. 4..... 1

STARK COUNTY

Consolidated Realty Co., Hill Top Oil 1. 5
Alliance B. Co., Alliance B. Co. 4..... 4
Purcell, W. H. Purcell 5..... dry
Purcell, W. H. Purcell 3..... gas

Wells completed 94
Production 1081
Dry 21
Gas 14

CENTRAL OHIO FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Dig.	Ttl.
Ashland	32	61	9	3	6	23	29
Medina	4	55	1	0	2	8	10
Lorain	1	0	1	0	2	8	10
Wayne	5	0	1	7	4	8	12
Holmes	5	38	0	3	5	10	15
Cuyahoga	0	0	0	0	0	1	1
Ashtabula	0	0	0	0	0	1	1
Richland	1	0	0	1	2	3	5
Knox	4	5	1	2	8	11	19
Coshocton	7	320	1	0	2	4	6
Summitt	8	0	1	7	2	23	25
Licking	9	34	1	2	6	13	19
Muskingum	5	386	1	1	1	18	19
Athens	12	4	3	3	3	9	17
Meigs	15	55	6	2	4	17	21
Jackson	3	0	1	2	5	11	16
Vinton	1	0	0	0	2	3	5
Lawrence	0	0	0	0	1	0	1
Tuscarawas	2	90	0	1	1	1	2
Stark	3	7	0	1	1	4	5
Fairfield	0	0	0	0	0	3	3
Guernsey	8	425	2	0	6	9	15
Belmont	1	0	0	0	1	2	3
Pike	0	0	0	0	0	1	1
Gallia	0	0	0	0	0	2	2
Harrison	1	0	1	0	0	2	2
Scioto	2	0	2	0	0	0	0
Total Oct.	122	1,386	32	46	79	194	264
Total Sept.	139	829	39	60	79	186	265
Difference	17	557	7	14	9	8	1

WELLS COMPLETED
ASHLAND COUNTY

Greene—C. V. Hassinger, Ohio Fuel Gas 2-3,583 ..... gas
James F. Cowan, Ohio Fuel Gas 1-4,724 ..... gas
Vermillion—John Obrecht, M. and S. Burtner 2 ..... gas
Orange—Arlo Steiner, Ohio Fuel Gas 1-4,754 ..... gas
Walter Lewis, Ohio Fuel Gas 1-4,798 gas
Esther M. Irvin, Ohio Fuel Gas 1-4,797 gas
Jackson—J. I. Rumbaugh, Ohio Fuel Gas 1-3,607 ..... gas
Lake—H. C. Young, Robinson & Co. 3.. dry
G. M. Heffelfinger, Robinson & Co. 5 dry
Albert Strang, Robinson & Co. 2 .... dry
Phil Shaffer, Robinson & Co. 3 3
H. C. Young, Robinson & Co. 4 ..... dry
B. B. Chesrown, Mohican O. & G. 6.. 35
B. B. Chesrown, Mohican O. & G. 7.. 7
Albert Butler, Wm. Freudenberger 1 dry
Ellis Aber, Round Lake Allotment Co. 2 ..... gas
Mohican—George W. Garst, The Kemrow Co. 2 9
Michael Ott, Sr., Meltzer & Co. 3, 4.. dry
W. G. Obrecht, W. J. Smith 3 ..... dry
Montgomery—Harry Dolby, Hulse & Kundtz 1 ..... dry
Perry—Edward Gardner, McIntyre & Co. 3 2

Wells completed 22
Production 61
Dry 9
Gas 3

MEDINA COUNTY

Chatham—J. and A. Jalensics, East Ohio Gas Co. 7 40
J. and A. Jalensics, East Ohio Gas Co. 8 ..... dry
J. and A. Jalensics, East Ohio Gas Co. 9 5
Sanford & Watson, Oko O. & G. 30.. 10

Wells completed 4
Production 55
Dry 1

LORAIN COUNTY

Grafton—Thomas Pijor, Ohio Fuel Gas 1-4,815 ..... dry

WAYNE COUNTY

Congress—Brady Geitgey, Ohio Fuel Gas 1-4,813 ..... gas
Jennie C. Stair, Ohio Fuel Gas 1-4,814 gas
John A. Martin, Harmon & George 1. gas
Chester—G. E. Snyder, Garmon & George 1 ..... gas
Albert Smyser, Faulkner & Co. 1 .... gas
George Mark, B. Slagel 3 ..... gas
George Mark, B. Slagel 4 ..... dry
Wooster—W. M. Orr, The Ohio Oil 5 .. gas

Wells completed 8
Dry 1
Gas 7

HOLMES COUNTY

Hardy—W. S. Fyers, East Ohio Gas 1.. 30
Paint—Mary Schrock, Ohio Fuel Gas 1-3,558 ..... gas
Richland—Charles S. Garver, Ohio Fuel Gas 1-4,718 ..... gas
Knox—J. G. Stetzline, East Ohio Gas 2 gas
Prairie—J. A. Baker, Ohio Fuel Gas 1-3,-037 8

Wells completed 5
Production 33
Gas 3

RICHLAND COUNTY

Worthington—J. W. Sellers, Ohio Fuel Gas 1-3,618 ..... gas

KNOX COUNTY

Brown—J. F. Severns, Ohio Fuel Gas 3-4,795 ..... gas
Rebecca Kunkle, Upham Gas 7 ..... gas
Jackson—H. R. Hall, Cameron & Co. 7 dry
L. V. Dugan, Arkansas Natural Gas 22 5

Wells completed 4
Production 5
Dry 1
Gas 3

COSHOCTON COUNTY

Clark—Robert Rhode, The Ohio Oil 3.. 100
Franklin—Cornelia Cory, Ohio Fuel Gas 2-4,787 ..... dry
Pike—D. and L. Rine, Ohio Fuel Gas 1 20
W. L. Norris, Pure Oil 1 25
Newcastle—Etta McClain, Preston Oil 2-1,327 135
Monroe—Jesse Gault, Ohio Fuel Gas 1-3,582 30
Tuscarawas—John Hall, Bell Bros. 1.. 10

Wells completed 7
Production 320
Dry 1

SUMMITT COUNTY

Franklin—Elton H. Daily, East Ohio Gas 2 ..... gas
O. Harring, East Ohio Gas 1 ..... gas
E. H. Pille, George Eagon 1 ..... gas
Ed Dunn, F. A. Brendall & Co. 1 .. gas
Levi Stump, F. A. Brendall & Co. 2.. gas
John Steiner, F. A. Brendall & Co. 1 dry
Greene—C. Kerr, F. A. Brendall & Co .1 gas
Sam Harring, Morgan, Houge & Co. 2 gas

Wells county 8
Dry 1
Gas 7

LICKING COUNTY

Fallsburg—James E. Martin, Emerald Pet. 6 14
John A. Little, Emerald Pet 5 ..... dry
Perry—J. C. Scanlon, Ohio Fuel Gas 1 8
Bernard Warfel, H. C. Farmer 1 2
James Wright, Hope Const. & Refg. Co. 3 ..... gas
Emmett Hoover, McClay Bros. 3 .... gas
Franklin—G. E. Cotterman, Bishop Destry & Co. 2 4
J. W. L. Motherspaw, Armstrong & Lyttle 15 3
Hanover—J. C. Williams, North Fork Oil 9 3

Wells completed 9
Production 34
Dry 1
Gas 2

MUSKINGUM COUNTY

Washington—J. M. Riley, Palmer & Geisinger 1 ..... dry
Jackson—W. E. Helphrey, Hope Const. & Refg. Co. 9 27
Lloyd McKee, Pure Oil 2 135
Otis McKee, Pure Oil 2 124
Brush Creek—C. Gillespie, Fritz & Duhart 1 ..... gas

Wells completed 5
Production 286
Dry 1
Gas 1

ATHENS COUNTY

Ames—Herman Ahle, Ohio Fuel Gas 1-4,811 ..... gas
F. J. Beasley, Ohio Fuel Gas 1-4,826.. gas
Chas. W. Wolfe, D. T. Orndorff 1 .... gas
J. E. Dean, Kiggins & Co. 4 ..... gas
Carthage—W. W. Blackwood, Ohio Fuel Gas 1-4,922 ..... dry
Berne—R. B. McKinley, Ohio Fuel Gas 1-4,740 ..... gas
Lodi—H. A. Pinkerton, Ohio Fuel Gas 1-4,856 ..... gas
Lee—Elsa Enlow, Ohio Fuel Gas 1-4,824 4
S. A. Cross, Three Way Oil 1 ..... dry
Rome—Henry A. Hatch, Ohio Fuel Gas 1-4,819 ..... gas
Waterloo—T. N. Hoover, Ohio Fuel Gas 1-4,816 ..... gas
Cannon—Robert Bean, Fox & Mosure 8 dry

Wells completed 12
Production 4
Dry 3
Gas 8

MEIGS COUNTY

Sutton—Nial Salser, The Preston Oil 3-1,347 4
Mary A. Davis, The Preston Oil 2-1,-361 24
Adele W. Cooper, W. N. Hovis & Co. 1 6
Mary Jividen, Tyree & Co. 8 5
A. E. Carnahan, Tyree & Co. 8 5
Belle Spencer, Hazlett & Co. 2 6
W. B. Cross, R. C. Miller & Co. 4 ... 5
Peter Karr, Southern Ohio Pet. 2 .. dry
John Carnahan, Southern Ohio Pet. 1 dry
Bedford—D. A. Dais, The Preston Oil 2-1,357 ..... gas
A. P. Willock & Co., H. F. McTaggert 1 ..... dry
Salisbury—Lanston Archer, Ohio Fuel Gas 1-3,510 ..... gas
Roy C. Stansberry, Cochran & Co. 2.. dry
Lebanon—Earl Jewett, Bowman & Deem 1 ..... dry
Rutland—A. and B. Saxon, H. F. McTaggert & Co. 1 ..... dry

Wells completed 15
Production 55
Dry 6
Gas 2

JACKSON COUNTY

Franklin—Dan Alban, Ohio Fuel Gas 2-4,767 ..... gas
Washington—Martha J. McKinnis, Ohio Fuel Gas 1-3,566 ..... gas
Lick—J. A. Ford, Ohio Fuel Gas 1-3,263 dry

Wells completed 3
Dry 1
Gas 2

VINTON COUNTY

Knox—Cameron Clark, Co-operative Oil 3 6

TUSCARAWAS COUNTY

Oxford—Robert McKean, W. C. Adair & Co. 1 ..... gas
Washington—G. W. Smeltz, Geo. Jewell & Co. 1 90

Wells completed 2
Production 90
Gas 1

STARK COUNTY

Lawrence—Geo. Seifert, Penn Oil & Gas 1 ..... gas
Lexington—W. H. Purcell, Alliance Machine 5 2
Consolidated Realty, Hill Top 1 5

Wells completed 3
Production 7
Gas 1

GUERNSEY COUNTY

Wheeling—Loren C. Stocker, Ohio Fuel Gas 1-4,736 20
C. and M. Gray, East Ohio Gas 2 ... 95
E. C. Quillan, East Ohio Gas 1 50
E. C. Quillan, East Ohio Gas 2 90
J. D. Alloway, Alloway O. & G. 5 .. 120
Cambridge—Chancey M. Oldham, Ohio Fuel Gas 1-4,810 20
Lena Black, Gordon Oil 3 ..... dry
Westland—A. Kerr, Cambridge Gas 3.. dry

Wells completed 8
Production 425
Dry 2

BELMONT COUNTY

Union—C. C. and W. Shepherd, Frank Stranges & Co. 3 ..... gas

HARRISON COUNTY

Short Creek—R. Mercer, Harrisville Oil & Gas 1 ..... dry

SCITO COUNTY

Porter—Wesley Caudill, Browning Bros. 1 ..... dry
Green—Herr & Adams, Waggoner & Matthews 1 ..... dry

Wells completed 2
Dry 2

LIMA FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Wood	4	17	2	0	0	4	4
Hancock	6	140	0	0	1	7	8
Allen	4	50	2	0	0	3	3
Auglaize	0	0	0	0	0	4	4
Sandusky	6	70	1	2	0	1	1
Mercer	1	15	0	0	0	0	0
Van Wert	0	0	0	0	0	1	1
Seneca	1	0	1	0	0	11	11
Lucas	1	0	0	1	0	1	1
Wyandot	0	0	0	0	1	0	1
Crawford	0	0	0	0	0	1	1
Logan	0	0	0	0	0	1	1
Huron	0	0	0	0	0	2	2
Total Oct.	23	292	6	3	2	36	38
Total Sept.	23	221	3	3	5	31	36
Difference	0	71	3	0	3	5	2

WELLS COMPLETED
WOOD COUNTY

Freedom—H. G. Foos, Home Banking Co. 4 5
Perrysburg—Mary Reitzel, Geo. W. Hoffman 5 12
Center—O. W. Hoffheims, Just Oil 1 .. dry
Perry—R. Bowman, Glass & Shellenberger 1 ..... dry
Ross—H. S. Landis, The Ohio Oil 19... abd

Wells completed 4
Production 17
Dry 2
Abandoned 1

HANCOCK COUNTY

Liberty—John Pank, L. Cramer 3 25
John K. Schoonover, N. and M. Harpst 4 15
Eagle—Alice Stauffer, Star & Clark 15. 20
M. H. Deeds, J. M. Steen & Co. 29 .. 50
J. H. Haley, B. Porter & Co. 29 15
Biglick—R. W. Moore, Robert Mitchell trustee 1 15

Wells completed 6
Production 140

ALLEN COUNTY

Bath—E. F. Sandy, C. A. and F. J. Peavey 3 ..... dry
E. T. McCarey, B. L. Carmon & Co. 3 15
J. Rumbaugh, Eugene Roalman 1 ... 35
Collins & French, R. S. Cheuvront 2, 3, 4, 5, 6 ..... abd
Marion—Stallkamp hrs., Stallkamp & Co. 1 ..... dry

Wells completed 4
Production 50
Dry 2
Abandoned 5

AUGLAIZE COUNTY

Noble—Frank Wahrer, Frank Wahrer 1 abd

SANDUSKY COUNTY

Washington—A. E. Waggoner, W. C. Richards & Co. 7 20
A. E. Waggoner, W. C. Richards & Co. 8 20
Edith Fought, Gibsonburg Oil 4 30
Jackson—Ed Nye, Melvin Good 1 ..... dry
Ballville—Wm. Infield, J. H. Murphy & Sons 1 ..... gas
Isabel Sibrel, J. H. Murphy & Sons 1 gas
Scott—C. H. McDaniels, The Ohio Oil 1, 4, 5, 7, 8 ..... abd

Wells completed 6
Production 70
Dry 1
Gas 2
Abandoned 5

MERCER COUNTY

Union—F. G. Fireovid, Margaret E. Grace 5 15
Chas. D. Weist, Mack P. Colt & Co. 1 abd
Frank Kinley, Mack P. Colt & Co. 1. abd
W. O. Norris, Stelzer & McClure 1, 2 abd
Black Creek—Jesse Ross, Willshire Oil 1 ..... abd
L. Vining, The Ohio Oil 1, 2 ..... abd
Center—Chas. Wurster, Mack P. Colt & Co. 1, 2 ..... abd
W. M. Bogart, Mack P. Colt & Co. 1, 2 ..... abd
Dublin—Willis G. Brubaker, Wm. E. Moody 1, 2 ..... abd

Wells completed 1
Production 15
Abandoned 13

VAN WERT COUNTY

York—Anna J. Haight, Mack P. Colt & Co. 1, 2 ..... abd
Edward R. Jones, Mack P. Colt & Co. 1, 2 ..... abd
Willshire—A. Medaugh, Opal McCrary 2, 3, 5, 6, 7, 8, 9 ..... abd

Abandoned 11

SENECA COUNTY

Hopewell—Sarah Brown, Brown & Barrett 1 ..... dry

LUCAS COUNTY

Waterville—Eliza Henderson, Waterville Gas & Oil 2 ..... gas
Oregon—Koch & Schmidt, The Ohio Oil 2, 3 ..... abd
Brandenburg & Helbing, The Ohio Oil 4 ..... abd
Jerusalem—R. H. and M. A. Eck, The Ohio Oil 11 ..... abd

Wells completed 1
Gas 1
Abandoned 4

OTTAWA COUNTY

Allen—P. Hartman, The Pure Oil 1 ... abd

ILLINOIS FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Dlg.	Ttl.
Clark	0	0	0	0	0	2	2
Crawford	11	115	1	1	3	7	10
Lawrence	4	194	1	0	0	2	2
Wabash	6	194	2	0	0	3	3
Effingham	0	0	0	0	0	1	1
Saline	0	0	0	0	0	4	4
Randolph	0	0	0	0	0	1	1
Monroe	0	0	0	0	0	1	1
Macoupin	1	0	1	0	0	0	0
Arsenal Island	1	2	0	0	0	0	0
St. Clair	34	1,438	3	0	0	22	22
Total Oct.	57	1,943	8	1	3	43	46
Total Sept.	77	2,810	10	0	3	50	53
Difference	20	867	2	1	0	7	7

WELLS COMPLETED
CRAWFORD COUNTY

Honey Creek—Mary E. Liston, Silurian Oil 7 8
Prairie—W. E. Evans, One Sixth Oil 4 15
Martin Newlin, Watson & Co. 2 10
J. Harve Gray, O. R. Gas & Oil 1 .. 50
Martin—A. W. Mann, H. D. Barker & Co. 1 ..... gas
E. E. Lindsay, Ohio-Dinsmoor Oil 18 ..... pressure
Emma Tohill, Ohio Dinsmoor Oil 11 ..... pressure
Oblong—J. M. Drake, The Ohio Oil 1 .. 2
Viola Dees, Associated Producers 6.. 5
Southwest—A. W. Mann, Dark Bend Oil 2 25
C. E. Davis, Phipps, Blosser & Co. 2.. dry

Wells completed 11
Production 115
Dry 1
Gas 1
Pressure 2

LAWRENCE COUNTY

Dennison—J. F. Snyder, Associated Producers 20 100
Wm. Gillespie No. 1, The Ohio Oil 8 24
Chas. Gillespie, Blosser & Co. 1 70
H. D. Hinkle, Silurian Oil 2, 14 .... abd
E. Meagher, The Ohio Oil 5 ..... abd
Jane Jones, Marsh Oil 13 ..... abd
Petty—H. J. Wright, John Phipps & Co. 1 ..... dry
A. R. Applegate, The Ohio Oil 1 .... abd
J. B. Smith, The Ohio Oil 1, 3 ..... abd
M. C. Coder, The Ohio Oil 1 ..... abd
J. F. Snyder, Associated Producers 1, 17 ..... abd
Thornton Combs, Silurian Oil 2, 16 21 abd
W. E. Neal, Silurian Oil 2, 17 ..... abd
Lawrence—Diana McCormick, The Ohio Oil 3 ..... abd

Wells completed 4
Production 194
Dry 1
Abandoned 16

WABASH COUNTY

Wabash—Alice R. Biehl, Coon Creek Oil 6 22
H. G. Fox, J. S. Young, Jr., & Co. 7 20
J. D. Thompson, A. Smith & Co. 1.. dry
Ed Wright, Ridge Farm Oil & Gas 2 dry
Jess Cisil, J. S. Young, Jr., & Co. 2.. abd
Jess Cisil No. 2, J. S. Young, Jr., & Co. 2 ..... abd
Friendsville—Mary A. Litherland, J. D. Toomey & Co. 7 20
Mary A. Litherland, J. D. Toomey & Co. 8 132
Mary A. Litherland, J. D. Toomey & Co. 2 ..... abd

Wells completed 6
Production 194
Dry 2
Abandoned 3

MACOUPIN COUNTY

Cahokia—Hye Weyen, Duncan Foundry & Machine 6 ..... dry

MISSISSIPPI COUNTY

Arsenal Island—Rittman, Majestic Oil & Gas 1 2

ST. CLAIR COUNTY

Sugar Loaf—Matilda Dyroff, The Ohio Oil 15 65
Matilda Dyroff, The Ohio Oil 16 45
Matilda Dyroff, The Ohio Oil 17 45
Matilda Dyroff, The Ohio Oil 18 300
Matilda Dyroff, The Ohio Oil 19 40
I. S. Gaskill, The Ohio Oil 2 75
Phillip Frye, The Ohio Oil Co. 2 45
Matilda Dyroff, The Ohio Oil 12 100
Wm. Lindemann lot, Jim McPeak 2.. 40
Louis Lindemann lot, Cole & Esther 1 50
Mo. Pac. R. R., Moody & Seagraves 1 25
Mo. Pac. R. R., Moody & Seagraves 2 4
Eliza Showman lot, Clarence Roques & Co. 1 40
C. Baker lot, C. C. Bundy, trus. 1 .. 25
J. M. Peel lot, Felsen & Roberts 1 .. 15
Hall-Weihl lots, St. Clair County Oil 1 70
H. E. Adams lot, Buyer & Co. 1 .... dry
Chas. Hoffstetter, Toney Foley 1 .... dry
Baptist Church lot, Carney & Co. 1.. 8
E. Proffer lot, Maxie & Spencer 1 .. 80
F. Phelps lot, Maxie & Spencer 1 ... 40
Frazier lot, L. G. Blackman & Co. 1 25
H. Thielman, John Gorman & Co. 1. 25
Oscar Miller, Petty & Olenburg 1 ... abd
Alice Dettenbach, Morris, Yeager & Co. 3 40
Alice Dettenbach, Morris, Yeager & Co. 4 40
H. A. Stroud, Delaney & Co. 2 17
Thielman heirs, Robinson & Co. 1 .. dry
Fred Eckert, Sanders & Co. 1 25
Fred Eckert, Pilot Oil 1 25
Fred Eckert, H. & M. Operating Co. 1 30
J. Reichert, H. & M. Operating Co. 1 30
H. Monsette, Ellis & Thomas 3 30
Margaret LaCroix, Ellis & Thomas 2 35
J. Edward Yoch, Ellis & Thomas 1.. 4

Wells completed 34
Production 1438
Dry 3
Abandoned 1

INDIANA FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Dlg.	Ttl.
Adams	3	40	0	0	0	2	2
Gibson	2	0	2	0	0	5	5
Pike	5	85	1	1	0	3	3
Daviess	1	40	0	0	0	0	0
Clay	0	0	0	0	0	1	1
Vigo	1	40	0	0	0	3	3
Sullivan	2	32	0	0	0	4	4
Spencer	2	0	2	0	0	2	2
Perry	2	0	2	0	0	4	4
Dubois	1	0	1	0	0	0	0
Warrich	0	0	0	0	0	2	2
Vandeburg	1	0	1	0	0	0	0
Knox	1	6	0	0	0	0	0
Benton	0	0	0	0	0	1	1
Fountain	0	0	0	0	0	1	1
Green	0	0	0	0	0	2	2
Crawford	0	0	0	0	0	1	1
Posey	0	0	0	0	1	1	2
Lagrange	1	0	1	0	0	1	1
Martin	0	0	0	0	0	2	2
Johnson	0	0	0	0	0	1	1
Putnam	0	0	0	0	0	1	1
Morgan	0	0	0	0	0	1	1
Madison	0	0	0	0	1	0	1
Marshall	0	0	0	0	1	0	1
Shelby	0	0	0	0	0	1	1
Monroe	0	0	0	0	0	2	2
Total Oct.	22	243	10	1	3	41	44
Total Sept.	9	100	4	2	4	51	55
Difference	13	143	6	1	1	10	11

WELLS COMPLETED
JAY COUNTY

Jackson—J. A. Jaqua, P. C. Jaqua 5, 6 abd
Bear Creek—S. J. Butcher, Charles S. Hunt 1 ..... abd

Abandoned 3

ADAMS COUNTY

Blue Creek—Bollenbacher hrs., Rosenthal & Co. 1 10
Jefferson—Otto Baker, Geo. S. Lacknett 1 15
S. S. Egley, Geo. S. Lacknett 2 15

Wells completed 2
Production 40

GIBSON COUNTY

Barton—Duncan hrs., United Oil Corp. 1 dry
Columbia—S. M. Cantrell, C. E. Wohmer & Co. 1 ..... dry
Washington—W. A. McRoberts, The Ohio Oil 2, 3 ..... abd

Wells completed 2
Dry 2
Abandoned 2

PIKE COUNTY

Clay—W. H. Lindy, F. B. Hillis, trus. 1 30
R. C. Hyneman, Wm. Bell & Co. 1 .. 15
John McAtee, C. C. Taliaferro, Jr. 1.. gas
Washington—Byron Preston, Robertson & Co. 1 40
Pruit Crow, Reicher & Co. 1 ..... dry
Madison—Joseph Snyder hrs., The Ohio Oil 2, 3, 4 ..... abd
J. P. Colman, A. B. Bement 2 ..... abd
Logan—F. M. Miller, A. B. Bement 1.. abd

Wells completed 5
Production 85
Dry 1
Gas 1
Abandoned 5

DAVIESS COUNTY

Veale—Alonzo Veale, L. G. Gee & Co. 3 40
McDougal hrs., L. G. Gee & Co. 1 .. abd

Wells completed 1
Production 40
Abandoned 1

VIGO COUNTY

Prairie Creek—F. E. Shattuck, Pearce & Co. 4 40

SULLIVAN COUNTY

Fairbanks—C. W. Scott, Charles W. Scott & Co. 4 30
Turman—Alex Raley, Wm. C. Kennedy Co. 5 2
J. T. Carruthers, R. A. Hooten 1, 5.. abd

Wells completed 2
Production 32
Abandoned 2

SPENCER COUNTY

Ohio—Charles Huffman, Ellis & Young 1 ..... dry
Cath. Powell, Eastern Gulf Oil 1 .... dry

Wells completed 2
Dry 2

PERRY COUNTY
Tobin—Glenn, Glenn & Knollman 1 ... dry
Geo. Beaver, Packard Oil 1 ..... dry

Wells completed 2
Dry 2

DUBOIS COUNTY
Cass—Wm. Messner, Wheeler & Co. 1 .. dry

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VANDEBURG COUNTY
Armstrong—John Wills, L. I. Martin 1 dry

KNOX COUNTY
Johnson—John Emmison, Roxana Pet. 1 6

LAGRANGE COUNTY
Clay—Isaac Christler, James W. Hunt & Co. 2 ..... dry

MICHIGAN FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Muskegon	19	1,030	2	3	16	20	36
Isabella	15	3,615	2	0	25	31	56
Midland	4	2,405	0	0	0	15	15
Kent	0	0	0	0	3	2	5
Ottawa	0	0	0	0	0	4	4
Oceana	0	0	0	0	1	8	9
Mason	1	0	0	1	1	2	3
Newyago	1	0	1	0	3	10	13
Manistee	0	0	0	0	0	1	1
Van Buren .	0	0	0	0	1	2	3
Mon.calm ..	1	0	1	0	0	2	2
Saginaw	1	15	0	0	0	1	1
Alpena	0	0	0	0	0	1	1
Tuscola	0	0	0	0	0	1	1
Cass	0	0	0	0	0	2	2
Mecosta	0	0	0	0	0	1	1
Lake	0	0	0	0	0	4	4
Clare	1	0	0	1	2	2	4
Gratiot	0	0	0	0	1	3	4
Kalkaska	0	0	0	0	1	1	2
Barren	0	0	0	0	0	2	2
Branch	0	0	0	0	0	1	1
Ingham	0	0	0	0	0	1	1
Emmett	0	0	0	0	0	1	1
Delta	0	0	0	0	0	1	1
Iosco	0	0	0	0	1	0	1
Monroe	0	0	0	0	1	1	2
Missaukee ...	0	0	0	0	1	0	1
Eaton	0	0	0	0	0	1	1
Allegan	2	0	2	0	1	1	2
Kalamazoo ..	0	0	0	0	0	1	1
Presque Isale.	0	0	0	0	1	0	1
Total Oct.	45	7,065	8	5	59	123	182
Total Sept..	47	5,881	15	3	61	140	201
Difference .	2	1,184	7	2	2	17	19

WELLS COMPLETED
MUSKEGON COUNTY
Muskegon—G. Kool, Citizens-Lake Shore Pet. 1-B ..... gas
G. Kool, Citizens-Lake Shore Pet. 2.. gas
A. Heinz, Muskegon Oil Corp. 2 .... gas
Stanley Danilloff, Muskegon Oil Corp. 8 60
Coleman-Valentine, Reliable Oil & Gas 1 25
Charles Cook, J. V. Howard 1 20
M. Engelman, Simplex Oil 1 45
Robert Layman, Crown Oil 1 50
County Sanatorium, Belch Bros. & Co. 3 25
J. D. Cooper, United Oil & Gas 1 15
H. Smeltikop, Grand Rapids Oil & Gas 2 30
County Property, Continental Oil & Gas 18 ..... dry
Laketon—H. Dykstra, Double Shot Oil & Gas 3 200
J. Thompson, Johnson Oil & Refg. 15 150
J. Thompson, Johnson Oil & Refg. 16 150
Kate Severcoll, Johnson Oil & Refg. 1 abd
H. Buteau, Neely, Foster & Senn 1.. 25
George Fenner, Nelson & Witt 2-B .. 200
Shuler, Sterling Oil Corp. 3 35
George S. Brand, Republic Oil 1 .... abd
J. Koning, Puritan-Majestic Oil 1 ... abd
Cedar Creek—Pete Jensen, J. F. Carpenter 1 ..... dry

Wells completed 19
Production 1030
Dry 2
Gas 3
Abandoned 3

ISABELLA COUNTY
Chippewa—State Isabella, The Ohio Oil 1-A 350
State Isabella, The Pure Oil 3-A 200
State Isabella, The Ohio Oil 2-B 300
State Isabella, The Pure Oil 4-B 450
Reems, The Pure Oil 2-B 250
W. D. Gibson, The Pure Oil 1 20
Bailey-Hall, Ohio Producing & Refg. 4 400
Crowell, Holsinger & Jordan 1 ..... dry
Joslyn, Chippewa Oil & Gas 4 350
Joslyn, Chippewa Oil & Gas 5 155
J. G. Brown, Sias Oil Dev. 2 400
McClintic, Leonard Oil & Gas 3 300
McClintic, Leonard Oil & Gas 4..... 400
Retta Lee, James M. Taggart 1 40
Denver—Mitchell, Brown Oil Dev. 1 .. dry

Wells completed 15
Production 3615
Dry 2

MIDLAND COUNTY
Greendale—State Midland, The Pure Oil 1-B 300
Indian-Reems, The Pure Oil 1-C 1055
Fred Sias, The Pure Oil 3 300
Carpenter, Sias Oil & Gas 2-B 750

Wells completed 4
Production 2405

MASON COUNTY
Grant—M. I. Diamond, Diamond-Thompson-Holland 1 ..... gas

NEWAYGO COUNTY
Everette—D. E. Uhl, Uhl & Sarver 1 .. dry

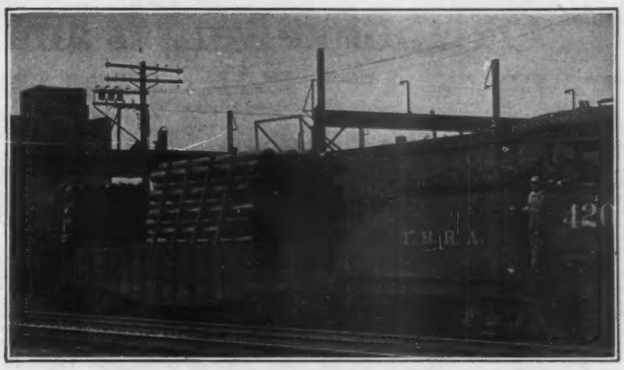
MONTCALM COUNTY
Cato—Ernest Snyder, Hale, Hickey & Co. 1 ..... dry

SAGINAW COUNTY
Saginaw—Spatz, Saginaw Pros. 73 15

CLARE COUNTY
Hatton—J. McKay, McKay & Mercer 1 gas

ALLEGANY COUNTY
Laketon—DeWitt, East Shore Oil 1 ... dry
Gunplain—Humphrey, Wiser Oil 1 .... dry

Wells completed 2
Dry 3



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Oklahoma-Kansas and Eastern Pipe Line Report

OKLAHOMA-KANSAS PIPE LINE STATEMENT FOR SEPTEMBER

Runs

	Month	Dy. av.
Prairie P. L. Co.*	5,100,000	170,000
Gulf P. L. Co.	2,146,332	71,544
Texas P. L. Co.	779,039	25,968
Magnolia P. L.	1,967,530	65,584
Empire P. L. Co.	1,704,032	56,801
Cosden P. L.	841,285	28,043
Sinclair P. L. Co.*	3,066,000	102,200
Oklahoma P. L. Co.	3,361,011	112,034
Other lines*	6,217,500	207,250
Total September	25,182,730	839,424
Total August	26,253,728	846,894
Difference	1,070,998	7,470

Shipments

	Month	Dy. av.
Prairie P. L. Co.†	6,552,482	218,416
Gulf P. L. Co.	1,899,684	63,323
Texas P. L. Co.	1,251,480	41,716
Magnolia P. L. Co.	2,198,026	73,268
Empire P. L. Co.	1,481,630	49,388
Cosden P. L. Co.	827,229	27,574
Sinclair P. L. Co.†	3,320,879	110,696
Oklahoma P. L. Co.	3,250,408	108,347
Other lines*	6,300,000	210,000
Total September	27,081,813	902,728
Total August	28,695,007	925,645
Difference	1,613,194	22,917

Stocks

Prairie O. & G. Co.	37,600,000
Gulf P. L. and Gypsy Oil	10,237,633
The Texas Company	7,969,471
Magnolia Petroleum Co.	9,423,863
Empire P. L. Co.	5,219,647
Mid-Continent Pet. Co.	3,319,518
Sinclair Crude Oil Pur. Co.	30,340,000
Carter Oil Co.	10,089,102
Oklahoma Pipe Line Co.	3,443,542
Other crude stocks*	27,000,000
Total September	134,642,776
Total August	134,563,144
Difference	79,632

*Estimated. †Prairie and Sinclair shipments include crude oil produced in Texas.

EASTERN PIPE LINE REPORTS

Runs From Wells

In the following table will be found the regular receipts from wells by various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for August and September:

	Aug. '29	Sept. '29
Nat Transit	307,546.82	294,748.59
S W Pa P L	92,216.86	89,643.06
Eureka P L	373,176.67	357,703.92
Buckeye P L (Macksburg)	334,947.96	321,438.55
Buckeye P L (Cleve)	13,069.95	10,770.51
Buckeye P. L (Lima, etc.)	130,364.10	103,534.37
Indiana P L	5,572.79	5,270.40
Cumberland P L	197,780.44	185,201.35
N Y Transit	31,452.26	30,538.20
Tide Water P L	280,916.87	59,187.79
Pure Oil	207,832.79	240,830.35
Emery P L	73,262.76	.....
Par'gon Dev	13,721.33	13,427.85
Stoll Oil Ref	5,334.49	4,827.82
Bradford Tran	.....	289,323.57
Total	3,067,386.14	2,019,446.57
Daily avg.	66,636.68	67,314.88

Note—Indian Refining Co. also reported other receipts of 451,348.24 bbls. Paragon Refining Co. had other receipts of 169,175.56 bbls. Paragon Development had other receipts of 507.72 bbls.

Petroleum Deliveries

The following tables exhibit the shipments or regular deliveries of various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky for August and September:

	Aug. '29	Sept. '29
Nat Transit	433,236.38	502,982.89
S W Pa P L	360,915.13	354,432.46
Eureka P L	252,805.08	230,056.08
Buckeye P L (Macksburg)	185,208.11	234,242.65
Buckeye P L (Cleve)	2,185.04	2,182.54
Buckeye P L (Lima, etc.)	1,593,076.04	1,632,220.66
Indiana P L	1,426,167.56	1,379,905.31
Cumberland P L	201,459.97	208,727.10
Southern P L	36,341.20	92,625.44
N Y Transit	290,004.27	279,908.63
Northern P L	192,966.11	168,857.71
Tide Water P L	249,359.87	211,086.95
Pure Oil	214,324.99	248,121.86
Emery P L	75,477.85	.....
Paragon Ref	174,796.43	170,090.96
Paragon Dev	14,507.08	12,326.20
Bradford Tran	.....	308,652.35
Total	5,733,319.61	6,036,420.79
Daily avg	184,945.79	201,214.02

Indian Refining Co. reported other deliveries of 362,506.75 bbls.

Gross Stocks

The gross stocks held by various pipe lines in the oil producing sections of New York, Pennsylvania, West Virginia, Ohio, Indiana and Kentucky at the close of August and September:

	Aug. '29	Sept. '29
Nat Transit	689,249.61	654,825.92
S W Pa P L	561,844.06	556,527.00
Eureka P L	1,338,075.04	1,415,789.95
Buckeye P L (Macksburg)	434,154.83	394,708.80
Buckeye P L (Cleve)	58,890.03	56,858.66
Buckeye P L (Lima)	2,721,519.25	2,860,912.26
Indiana P L	668,771.87	575,104.03
Cumberland P L	556,916.14	539,326.53
Southern P L	399,390.51	387,726.89
N Y Transit	201,133.36	167,745.27
Northern P L	432,718.68	365,819.17
Tide Water P L	1,028,430.16	955,021.33
Pure Oil	16,303.76	15,318.69
Emery P L	10,275.09	.....
Paragon Ref	11,989.49	10,799.07
Indian Ref	50,525.66	141,337.05
Paragon Dev	4,645.76	6,461.28
Tuscarora	264,809.29	265,097.04
Bradford Trans	.....	73,688.01
Total	9,440,642.59	9,443,066.95
Increase	229,047.24	2,424.36

Grades of Oil

The following table shows the amount of the different grades of oil held by the Eastern Pipe Lines at the close of August and September showing the gross stocks of the above fields:

Penn'a	3,279,178.01	3,341,064.05
Lima	648,102.38	574,215.28
Kentucky	767,210.90	713,582.53
Mid-Cont	4,457,893.11	4,519,635.67
Illinois	288,258.19	294,569.47
Total	9,440,642.59	9,443,066.95

Daily Average Runs

The following table shows the daily average runs of the Pennsylvania, Lima and Kentucky oil fields for the past four years:

	1926	1927	1928	1929
Jan.	55,630	56,209	52,904	51,749
Feb	60,394	61,298	57,002	51,833
Mar.	61,644	63,247	57,485	54,252
April	63,019	60,927	56,812	58,444
May	60,580	60,284	62,067	59,902
June	61,121	62,757	58,230	58,833
July	63,206	58,674	57,144	66,087
Aug.	61,815	60,870	57,745	66,687
Sept.	64,639	60,285	53,487	67,315
Oct.	161,132	147,080	58,100	..
Nov.	67,774	57,275	53,565	.....
Dec.	58,755	53,089	52,025	.....

Daily Average Shipments

The following table gives daily average shipments from the Pennsylvania, Lima and other fields for the past four years:

	1926	1927	1928	1929
Jan.	156,056	141,227	146,465	165,721
Feb.	159,488	138,534	167,368	159,387
Mar.	150,239	133,777	158,883	161,474
April	152,374	140,227	172,935	169,737
May	160,998	144,594	180,559	184,281
June	160,267	149,772	188,024	185,404
July	160,045	151,850	189,470	194,763
Aug.	151,929	188,653	192,853	184,946
Sept.	158,915	144,213	194,138	201,214
Oct.	161,132	147,036	176,000	.....
Nov.	172,608	150,975	176,898	.....
Dec.	136,428	144,540	173,572	.....

Gross Stocks

In the following table will be found the gross stocks of the various lines of the Pennsylvania, Lima and Kentucky oil fields, including oil received from other lines at the close of each month for the past three years:

	1927	1928	1929
Jan.	9,718,008	12,276,710	7,596,564
Feb.	10,119,162	12,180,419	8,738,835
Mar.	10,794,044	12,239,725	9,002,058
April	11,112,295	11,740,125	8,978,172
May	11,359,381	11,602,468	8,903,560
June	11,493,673	11,287,678	8,921,275
July	11,458,128	10,819,321	9,211,595
Aug.	11,959,115	10,236,743	9,440,643
Sept.	12,212,716	9,660,910	9,443,067
Oct.	12,047,661	9,229,709	.....
Nov.	11,939,740	8,366,552	.....
Dec.	12,340,297	7,539,555	.....

Franklin Pipe Co.

The following table exhibits the condition of the Franklin Pipe Line at the close of business for the months named and not counted in the stocks and averages reported above:

1928—	Runs	Shipments	Stocks
Sept.	2,820.31	5,255.42	15,285.93
Oct.	1,289.93	538.89	17,551.93
Nov.	2,663.53	788.47	19,426.99
Dec	3,053.60	3,167.53	19,426.99
1929 —			
Jan.	2,099.90	.....	19,313.06
Feb.	3,469.47	6,873.20	17,009.23
Mar.	3,330.82	3,595.01	16,745.04
April	4,864.07	4,243.59	17,365.52
May	2,688.59	2,455.54	17,598.57
July	2,947.62	3,329.35	4,503.48
Aug.	2,742.73	2,889.47	4,356.74
Sept.	2,925.71	2,897.34	4,385.11

The Illinois Field

The following table gives the report of the Illinois Pipe Line Co. in Illinois.

Gross stocks, Oct. 1	2,269,619.82
Runs from wells	556,002.64
Other receipts	301,231.54
Regular deliveries	637,220.53
Other deliveries	367,614.72

The amount of Illinois oil run by the Tidewater Pipe Co. in September was 26,455.62 bbls. Deliveries were 32,727.19 bbls. Adding these figures to those of the Illinois Pipe Line Co. makes the runs and deliveries as follows:

1928—	Runs	Deliveries
Oct.	626,147.64	626,290.40
Nov.	576,332.88	702,589.93
Dec.	584,633.00	491,517.26
1929—		
Jan.	570,727.38	545,084.66
Feb.	517,330.17	503,387.70
Mar.	738,319.67	586,049.60
April	515,374.27	654,297.96
May	608,981.60	673,812.83
June	568,454.70	818,845.97
July	611,106.79	828,159.44
Aug.	625,351.99	746,425.06
Sept.	582,457.66	669,947.72

Tidewater Pipe Co., Ltd., also delivered in September, 268,016.93 bbls. Oklahoma oil.

AVERAGE DAILY RECEIPTS OF CALIFORNIA OIL AT ATLANTIC AND GULF COAST PORTS

Average bbls per day—	ATLANTIC PORTS						GULF COAST PORTS					
	Baltimore	Boston	New York	Philadelphia	Others	Total	Galveston	New Orleans Baton Rouge	Port Arthur Sabine Pass	Tampa	Total	Total all ports
February	14,214	.....	38,750	17,250	11,607	81,821	.....	.....	.....	.....	3,750	85,571
March	19,903	968	31,268	18,581	7,355	78,065	.....	.....	.....	.....	.....	78,065
April	16,667	.....	33,333	13,333	1,134	64,467	.....	.....	.....	.....	7,333	65,200
May	16,226	2,416	31,326	10,806	2,129	62,903	.....	.....	.....	.....	.....	62,903
June	14,866	3,167	33,100	10,300	6,100	57,533	.....	.....	.....	.....	.....	57,533
July	15,387	4,806	34,290	19,338	2,452	76,323	.....	.....	.....	.....	4,161	80,484
August	20,339	3,129	35,226	18,903	5,548	83,194	.....	.....	.....	.....	12,161	95,355
September	19,433	.....	31,834	11,900	6,200	69,367	.....	.....	.....	.....	4,800	74,167

AVERAGE DAILY IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS

Average bbls per day—	ATLANTIC PORTS						GULF COAST PORTS					
	Baltimore	Boston	New York	Philadelphia	Others	Total	Galveston	New Orleans Baton Rouge	Port Arthur Sabine Pass	Tampa	Total	Total all ports
February	13,750	15,071	135,179	32,750	17,893	214,643	.....	34,357	821	143	35,321	249,964
March	18,548	26,064	145,516	39,163	28,162	257,452	.....	42,581	2,322	.....	44,903	302,355
April	19,733	18,367	137,233	50,267	22,567	248,167	6,867	25,066	10,367	1,500	43,800	291,967
May	29,806	19,258	138,000	49,936	22,322	259,322	6,677	26,323	3,000	1,323	37,323	296,645
June	21,433	8,667	134,600	42,967	18,300	225,967	8,600	22,633	11,800	2,033	45,066	281,033
July	40,097	15,129	111,677	43,420	31,516	241,839	4,774	12,097	9,516	161	26,548	268,387
August	32,387	14,355	162,644	30,936	20,355	261,677	4,226	12,742	.....	1,484	18,452	280,129
September	32,967	9,000	136,633	54,300	32,900	265,800	6,900	22,300	5,367	1,333	36,500	302,300

GROSS PRODUCTION IN THE UNITED STATES FOR 12 MONTHS (REVISED)

(In Barrels of 42 gallons)

1928-29		California	Oklahoma	Texas	Kansas	Arkansas	Louisiana	Rocky Mts.	Eastern	Total
October:	Month	19,430,992	23,431,071	22,176,853	3,058,460	2,652,484	1,836,221	2,571,822	3,612,000	78,769,903
	Daily average	626,806	755,841	715,376	98,660	85,564	59,233	82,962	116,516	2,540,964
November:	Month	19,907,526	22,078,680	20,791,798	2,977,300	2,476,080	1,801,914	2,388,870	3,348,000	75,770,668
	Daily average	663,584	735,956	693,059	99,260	82,536	60,064	79,629	111,600	2,505,689
December:	Month	21,674,703	23,435,732	22,180,102	2,988,400	2,531,571	1,846,841	2,389,040	3,581,000	79,407,379
	Daily average	695,958	752,410	715,487	96,400	81,341	59,576	73,840	115,516	2,561,528
January:	Month	23,385,939	23,575,874	23,412,226	2,861,641	2,463,536	1,807,887	2,076,070	3,489,000	82,012,163
	Daily average	754,385	728,254	755,233	92,311	79,146	58,318	66,970	110,936	2,645,554
February:	Month	22,300,707	20,464,164	20,816,209	2,557,968	2,154,194	1,569,930	1,965,656	3,113,000	74,941,228
	Daily average	796,454	730,863	743,484	91,356	76,936	56,068	70,202	111,184	2,676,472
March:	Month	24,324,729	20,838,262	24,358,592	2,951,076	2,303,724	1,756,153	2,195,823	3,586,000	82,314,359
	Daily average	784,669	672,202	785,761	95,196	74,314	56,650	70,838	115,677	2,655,302
April:	Month	23,295,060	20,235,290	23,493,097	2,112,740	2,188,680	1,702,479	2,085,030	3,524,000	79,636,376
	Daily average	776,502	674,513	783,102	103,758	72,956	56,750	69,501	117,467	2,654,546
May:	Month	24,053,351	21,245,453	24,489,101	3,665,099	3,200,158	1,713,261	2,252,522	3,879,000	83,617,945
	Daily average	775,915	685,563	789,965	118,229	71,618	55,267	72,662	125,129	2,697,353
June:	Month	24,624,627	20,561,113	24,698,029	3,636,150	3,112,270	1,699,581	3,180,752	3,887,000	83,399,521
	Daily average	820,521	685,371	823,267	121,205	70,327	56,653	72,692	129,567	2,779,984
July:	Month	26,796,627	23,371,925	26,969,989	3,867,157	3,137,047	1,716,488	3,360,836	4,439,200	90,659,730
	Daily average	864,407	721,671	869,997	124,747	68,937	55,370	76,156	143,200	2,924,489
August:	Month	27,233,353	22,429,492	27,490,489	3,816,555	3,036,033	1,764,973	3,475,016	4,340,000	91,638,961
	Daily average	878,495	723,532	886,757	123,115	67,293	56,934	79,936	140,000	2,956,092
September:	Month	26,104,264	21,402,390	25,987,103	3,780,690	1,959,720	1,718,250	2,346,480	4,200,000	87,498,896
	Daily average	870,142	713,413	866,236	126,023	65,324	57,275	78,234	140,000	2,916,647
	Total 12 months	281,631,878	260,159,435	286,862,587	42,273,734	27,265,527	20,933,978	27,190,917	44,948,000	989,667,066

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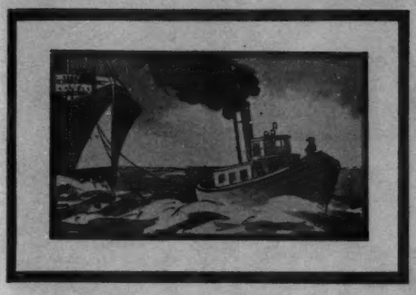
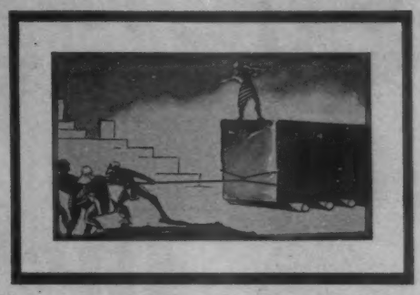
POWER

in the GASO figure 1508 Pump



LUBRICATION

A massive ocean liner is easily moved by a small tug because it floats on a sea of liquid. All moving parts in the Gaso Fig. 1508 Pump move easily because each runs in a flood of clean oil.



BEARINGS

Long ago men learned to move heavy loads on rollers. Today's best engineering practice is followed in this pump—loads of main and pinion bearings are carried on Timken Tapered Roller Bearings.

The most important fixed cost element in the operation of pumps is the amount of power consumed.

In the Gaso Figure 1508 Power Pump, correct engineering provides for the utmost efficiency . . . thus reducing the power cost and increasing the operating profits of its users.

GEARS

Horses pull steadily by keeping some of their feet always on the ground. The Continuous Tooth Herringbone Gears in this pump transmit power smoothly and with 98.9 to 99.4% efficiency.

PARTS DESIGN

From the arches developed by the ancients to the H-column steel used by modern builders, every principle of scientific design is followed in building this pump—to the end that reliability of performance is insured by the reliability of each part.

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Fig. 1508. Interchangeable Liner type Gaso Pump has capacities ranging from 45 bbls. per hour at 800 lbs. pressure to 270 bbls. at 250 lbs. Can be arranged for belt or engine drive, direct connected to engine through flexible coupling or for motor drive through silent chain or reduction gears.

GASO PUMPS

for every oil industry need

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